

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

1A10
Revision 50
PIPER

PA-23
PA-23-160
PA-23-235
PA-23-250
PA-E23-250

September 10, 2003

AIRCRAFT SPECIFICATION NO. 1A10

Type Certificate Holder The New Piper Aircraft, Inc.
2926 Piper Drive
Vero Beach, Florida 32960

I. - Model PA-23. Approved January 29, 1954, 4 PCLM (Normal Category) or 5 PCLM (Normal Category) when Item 605, 609 or 613 is installed.

Engines 2 Lycoming O-320 Series (Item 113A)
(Carburetor setting No. 10-3678-11, 10-3678-12 or 10-3678-32)

Fuel 80/87 minimum grade aviation gasoline

Engine Limits All operations, 2700 r.p.m. (150 hp)

Airspeed Limits V_{ne} Never exceed 208 mph (181 knots)
(CAS) V_{no} Maximum structural cruise 165 mph (143 knots)
V_{le} Landing gear extended 125 mph (109 knots)
V_p Maneuvering 124 mph (108 knots)
V_{fe} Flaps extended 100 mph (87 knots)

Center of Gravity Range (+94.0) to (+100.0) at 3500 lb.
(Gear Extended) (+88.5) to (+100.0) at 2450 lb. or less
Straight line variation between points given.
(Moment due to retracting of landing gear - 760 in.-lb.)

Empty Weight C. G. Range None

Maximum Weight 3500 lb.
See NOTE 3 for eligibility at 3800 lb.

No. of Seats 4 (2 at +89, 2 at +126.5)
5 (2 at +89, 2 at +126.5, 1 at +150) when Item 605, 609 or 613 is installed.

Maximum Baggage 200 lb. at (+150) (Rear compartment)
See NOTE 2 for baggage with rear seat removed.
30 lb. at (+150) (Rear compartment) when Item 605, 609 or 613 installed.

Fuel Capacity 72 gallons at (+113) (One 36 gallon tank in each wing)
See Item 107 for auxiliary fuel tanks.

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<u>Oil Capacity</u>	4 gallons at (+59)	(2 gallons in each engine)
<u>Control Surface Movements</u>	Main Surfaces	Aileron 30° Up 15° Down Elevator 20° Up 15° Down Rudder 30° Left 30° Right
	Flaps	50° Down
	Tab (main surface in neutral)	
	Rudder	25° Left 25° Right

Serial Numbers Eligible 23-1 through 23-1182 (except 23-1177). (See NOTE 3 for S/N eligible for 3,800 lb.)

Required Equipment In addition to the pertinent required basic equipment specified in CAR 3, the following items of equipment must be installed:
Items 1(a), 2(a), 3(a), 101(a), 102(a), 103(a), 105(a), 106(a), 201(a), 202(a), 205(a), 206, 301(a), 302(a), and 401(a).

II. - Model PA-23-160, Approved October 14, 1957, 4 PCLM (Normal Category) or 5 PCLM (Normal Category) when Item 609 or 613 is installed.

<u>Engines</u>	2 Lycoming O-320 Series (Item 113B) (Carburetor setting No. 10-3678-11, 10-3678-12 or 10-3678-32)			
<u>Fuel</u>	91/96 minimum grade aviation gasoline			
<u>Engine Limits</u>	For all operations, 2700 r.p.m. (160 hp)			
<u>Airspeed Limits</u>	V_{ne}	Never exceed	227 mph	(197 knots)
<u>(CAS)</u>	V_{no}	Maximum structural cruise	180 mph	(156 knots)
	V_p	Maneuvering	130 mph	(113 knots)
	V_{le}	Landing gear extended		
		S/N 23-1177, 23-1183 through 23-1773, 23-1175 through 23-1870:	125 mph	(109 knots)
		S/N 23-1774, 23-1871 through 23-2046:	150 mph	(130 knots)
	V_{fe}	Flaps extended		
		S/N 23-1177, 23-1183 through 23-1773, 23-1775 through 23-1870:	100 mph	(87 knots)
		S/N 23-1774, 23-1871 through 23-2046:	125 mph	(109 knots)
<u>Center of Gravity Range</u>	(+95.0) to (+100.0) at 3800 lb.			
<u>(Gear Extended)</u>	(+89.0) to (+100.0) at 2650 lb. or less			
	Straight line variation between points given.			
	(Moment due to retracting of landing gear - 760 in. -lb.)			

Empty Weight C. G. Range

None

Maximum Weight

3,800 lb.

No. of Seats

4 (2 at +89, 2 at +126.5)
5 (2 at +89, 2 at +126.5, 1 at +150) when Item 609 or 613 is installed.

Maximum Baggage

200 lb. at (+150) (Rear compartment)
See NOTE 2 for baggage with rear seats removed.
30 lb. at (+150) (Rear compartment) when Item 609 or 613 is installed.

Fuel Capacity

72 gallons at (+113) (One 36 gallon tank in each wing)
See Item 107 for auxiliary fuel tanks.

Oil Capacity

4 gallons at (+59) (2 gallons each engine)

<u>Control Surface Movements</u>	Main Surfaces	Aileron	30°	Up	15°	Down
		Elevator	20°	Up	15°	Down
		Rudder	30°	Left	30°	Right
	Flaps				50°	Down
	Tabs (main surface in neutral)	Rudder	25°	Left	25°	Right

Serial Numbers Eligible 23-1177, 23-1183 through 23-2046.

Required Equipment In addition to the pertinent required basic equipment specified in CAR 3, the following items of equipment must be installed:
Items 1(b), 2(a), 3(a), 101(a), 102(a), 103(b), 105(b), 106(a), 110, 201(b), 202(a), 205(a), 206, 301(a), 302(a), and 401(p).

III. - Model PA-23-250 (Navy UO-1), Approved September 18, 1959; 5 PCLM (Normal Category) or 6 PCLM (Normal Category), Approved December 15, 1961, when Item 603(b) is installed.

Engines 2 Lycoming O-540 series or IO-540 series (Eligible only on S/N 27-2000 through 27-4916, and 27-7304917 through 27-7554168) (See Item 113C)

Fuel 91/96 minimum grade aviation gasoline

Engine Limits For all operations, 2575 r.p.m. (250 hp)

<u>Airspeed Limits</u> <u>(CAS)</u>	V _{ne}	Never exceed	249 mph	(216 knots)
	V _{no}	Maximum structural cruise	198 mph	(172 knots)
	V _{le}	Landing gear extended	150 mph	(130 knots)
	V _p	Maneuvering (4,800 lb.)	145 mph	(126 knots)
	V _p	Maneuvering (5,200 lb.)	149 mph	(129 knots)
	V _{fe}	Flaps extended (Full down)	125 mph	(109 knots)

On S/N 27-2505 through 27-4916, and
27-7304917 through 27-7554168 when Item 625
is installed:

V _{fe}	Flaps extended (¼ down)	160 mph	(139 knots)
V _{fe}	Flaps extended (½ down)	140 mph	(122 knots)

<u>Center of Gravity Range</u> <u>(Gear Extended)</u>	(+98.0)	to	(+100.5)	at	4,800 lb.
	(+92.5)	to	(+100.5)	at	4,300 lb.
	(+85.7)	to	(+100.5)	at	3,200 lb. or less

S/N 27-2505 through 27-4916, and 27-7304917 through 27-7554168 (See required equipment list for operation at 5,200 lb.)

(See NOTE 5 for eligibility for extended C.G. range):

(+99.0)	to	(+100.5)	at	5,200 lb.
(+97.0)	to	(+100.5)	at	5,000 lb.
(+85.7)	to	(+100.5)	at	3,200 lb. or less

Straight line variation between points given.

(Moment due to retracting of landing gear - 760 in.-lb.)

Empty Weight C. G. Range None

Maximum Weight 4,800 lb.
S/N 27-2505 through 27-4916, and 27-7304917 through 27-7554168:
5,200 lb. - Takeoff (See required equipment list for operation at 5,200 lb.)
4,940 lb. - Landing

Maximum Weight
(continued)

Maximum permissible weight with zero fuel:

S/N 27-1 through 27-1999: 4,000 lb.
 S/N 27-2000 through 27-4916, and
 27-7304917 through 27-7554168: 4,400 lb. (Normally aspirated)
 S/N 27-2505 through 27-4916, and
 27-7304917 through 27-7554168: 4,500 lb. (Turbocharged)

No. of Seats

5 (2 at +89, 2 at +126.5, 1 at +150) for S/N 27-1 through 27-1999
 6 (2 at +89, 2 at +126.5, 2 at +157) for S/N 27-2000 through 27-4916, and
 27-7304917 through 27-7554168.

Maximum Baggage

200 lb. at (+150) (rear compartment) for S/N 27-1 through 27-1999
 150 lb. at (+10) (forward compartment) for S/N 27-2000 through 27-4916, and
 27-7304917 through 27-7554168
 150 lb. at (+183) (rear compartment) for S/N 27-2000 through 27-4916, and
 27-7304917 through 27-7554168.

Fuel Capacity

144 gallons at (+113) (4 tanks, 2 in each wing, each tank 36 gallons)
 See NOTE 1 for unusable fuel data.

Oil Capacity

6 gallons at (+55) (3 gallons each engine)

Control Surface
Movements

Main Surfaces	Aileron	30° Up	15° Down
	Stabilator (L.E.)	9° Up	9° Down
	Rudder	30° Left	35° Right
Flaps			50° Down
Tabs (main surface in neutral)			
	Rudder	25° Left	19° Right
	Stabilator	8° Up	3° Down
	Stabilator *	5° Up	6° Down

* S/N 27-4426, 27-4574 through 27-4916, and 27-7304917 through 27-7554168
 See NOTE 4 for rudder and stabilator balance weights.

Serial Numbers Eligible

27-1 through 27-4916, and 27-7304917 through 27-7554168.
 See NOTE 6 and NOTE 9 for airworthiness certification eligibility in the United States.

Required Equipment

In addition to the pertinent required basic equipment specified in CAR 3, the following items of equipment must be installed,
 S/N 27-1 through 27-1999:
 Items 1(e); 2(d); 3(b); 101(b) or 101(c); 102(b); 103(d); 105(c); 106(a); 201(c); 202(b) or 202(c); 205(b); 206; 301(c); 302(a) or 302(b); 304(b), 304(c) or 304(e); 401(t); 601(c) or 601(d); and 612.

S/N 27-2000 through 27-2504:

Items 1(e); 2(d); 3(b); 101(b), 101(c) or 101(d); 102(b) or 102(c); 103(d); 105(c), 105(d), 105(f) or 105(h); 106(a); 201(c); 202(b) or 202(e); 205(b); 206; 301(d); 302(b) or 302(c); 304(b), 304(e) or 304(f); 401(z), 601(c) or 601(d), 603(b), and 612.

S/N 27-2505 through 27-3836, 27-3838 through 27-3943 at 4,800 lb. Maximum Weight:
 Items 1(i); 2(e); 3(c); 101(f); 102(e) or 102(f); 103(e); 105(h); 106(e), 106(f) or 106(g); 114; 201(c); 202(b) or 202(c); 205(b); 206; 302(c); 304(b) or 304(e); 305; 401(aq); 601(c); 603(b); 608(c); 612, and 614.

S/N 27-2505 through 27-3836, 27-3838 through 27-3943 at 5,200 lb. Maximum Weight:
 Items 1(i) or 1(j); 2(e); 3(c); 101(f); 102(f) or 102(g); 103(e); 105(h) or 105(i); 106(e), 106(f), 106(g) or 106(h); 114; 201(c) or 201(d); 202(b) or 202(c); 205(b); 206; 302(c); 304(b) or 304(e); 305(a); 401(ax); 601(c); 603(b); 608(c); 612; 614(a); 617; and 618.

<u>Required Equipment (cont)</u>	<p>S/N 27-3837, 27-3944 through 27-4425, 27-4427 through 27-4573: Items 1(i) or 1(j); 2(e); 3(c); 101(f); 102(f) or 102(g); 103(e); 105(h) or 105(i); 106(e), 106(g) or 106(h); 114; 201(d); 202(b) or 202(c); 205(b); 206; 302(c); 304(b) or 304(e); 305(b); 401(bv); 601(c); 603(b); 608(c); 612; 614(b); 617; and 618.</p> <p>S/N 27-4426, 27-4574 through 27-4916, and 27-7304917 through 27-7305134: Items 1(m) or 1(o); 2(e); 3(d); 101(f); 102(f); 103(e); 104(c); 105(i); 106(h); 114(a); 201(d); 202(b) or 202(c); 205(b); 206; 302(c); 303(f); 304(b), 304(e) or 306(a); 305(b); 401(c1); 601(c); 603(b); 608(c); 612(b); 617; and 618.</p> <p>S/N 27-7305135 through 27-7554168: Items 1(o); 2(e) or 2(f); 3(d); 101(f); 102(f); 103(e); 104(c); 105(i); 106(h); 114(a); 201(d); 202(b) or 202(c); 205(b); 206; 302(c); 303(f); 305(b); 306(b); and 401(c1).</p>
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IV. - Model PA-23-235, 5 PCLM (Normal Category), Approved January 22, 1962.

Same as Model PA-23-250, 5 PCLM, except for powerplants.

<u>Engines</u>	2 Lycoming O-540 series (Item 113D) Carburetor Setting No. IO-4057-1 or IO-4404		
<u>Fuel</u>	80/87 minimum grade aviation gasoline		
<u>Engine Limits</u>	All operations, 2575 r.p.m. (235 hp)		
<u>Airspeed Limits</u>	V _{ne}	Never exceed	249 mph (216 knots)
<u>(CAS)</u>	V _{no}	Maximum structural cruise	198 mph (172 knots)
	V _{le}	Landing gear extended	150 mph (130 knots)
	V _p	Maneuvering	145 mph (126 knots)
	V _{fe}	Flaps extended (Full down)	125 mph (109 knots)
	When Item 625 is installed:		
	V _{fe}	Flaps extended (¼ down)	160 mph (139 knots)
	V _{fe}	Flaps extended (½ down)	140 mph (122 knots)
<u>Center of Gravity Range</u>			
<u>(Landing Gear Extended)</u>	(+98.0)	to (+100.5)	at 4,800 lb.
	(+92.5)	to (+100.5)	at 4,300 lb.
	(+85.7)	to (+100.5)	at 3,250 lb. or less
	Straight line variation between points given.		
	(Moment due to retracting of landing gear -760 in.-lb.)		
<u>Empty Weight C. G. Range</u>	None		
<u>Maximum Weight</u>	4,800 lb.		
<u>No. of Seats</u>	5 (2 at +89, 2 at +126.5, 1 at +150)		
<u>Maximum Baggage</u>	200 lb. at (+150) (Rear compartment)		
<u>Fuel Capacity</u>	144 gallons at (+113) (4 tanks, 2 in each wing, each tank 36 gallons) See NOTE 1 for unusable fuel data.		
<u>Oil Capacity</u>	6 gallons at (+55) (3 gallons each engine)		

<u>Control Surface Movements</u>	Main Surfaces	Aileron	30°	Up	15°	Down
		Stabilator (L.E.)	9°	Up	9°	Down
		Rudder	30°	Left	35°	Right
	Flaps				50°	Down
	Tab (main surface in neutral)	Rudder	25°	Left	19°	Right
		Stabilator	8°	Up	3°	Down
See NOTE 4 for rudder and stabilator balance weights.						

Serial Numbers Eligible 27-505 through 27-622.

Required Equipment In addition to the pertinent required basic equipment specified in CAR 3, the following items of equipment must be installed:
Items 1(e), 2(d), 3(b), 101(b), 102(b), 103(d), 105(c), 106(a), 201(c), 202(b) or 202(c), 205(b), 206, 301(d), 302(a), 304(b) or 304(e), 401(ac), 601(c), and 612.

V. - Model PA-E23-250, 6 PCLM, (Normal Category), Approved June 21, 1965.

Engine 2 Lycoming IO-540 series (See Item 113C)

Fuel 91/96 min. grade aviation gasoline

Engine Limits For all operations, 2575 r.p.m. (250 hp)

<u>Airspeed Limits (CAS)</u>	V _{ne}	Never exceed	249 mph	(216 knots)
	V _{no}	Maximum structural cruise	198 mph	(172 knots)
	V _{le}	Landing gear extended	150 mph	(130 knots)
	V _p	Maneuvering	145 mph	(126 knots)
	V _{fe}	Flaps extended (Full down)	125 mph	(109 knots)
	When Item 625 is installed:			
	V _{fe}	Flaps extended (¼ down)	160 mph	(139 knots)
	V _{fe}	Flaps extended (½ down)	140 mph	(122 knots)

Center of Gravity Range (Gear Extended) (+97.0) to (+100.5) at 4,995 lb.
See NOTE 5 for eligibility for extended C. G. Range.
(+85.7) to (+100.5) at 3,250 lb. or less
Straight line variation between points given.
Moment due to retracting of landing gear - 760 in.-lb.

Empty Weight C. G. Range None

Maximum Weight 4,940 lb. - Landing
4,995 lb. - Takeoff
Maximum permissible weight with zero fuel:
4,400 lb. (Normally aspirated)
4,500 lb. (Turbocharged)

No. of Seats 6 (2 at +89, 2 at +126.5, 2 at +157)

<u>Maximum Baggage</u>	150 lb. at (+10)	(forward compartment)
	150 lb. at (+183)	(rear compartment)
<u>Fuel Capacity</u>	144 gallons at (+113)	(4 tanks, 2 in each wing, each tank 36 gallons)
	See NOTE 1 for unusable fuel data.	
<u>Oil Capacity</u>	6 gallons at (+55)	(3 gallons each engine)
<u>Control Surface Movements</u>	Main Surfaces	Aileron 30° Up 15° Down
		Stabilator (L.E.) 9° Up 9° Down
		Rudder 30° Left 35° Right
	Flaps	50° Down
	Tabs (main surface in neutral)	
		Rudder 25° Left 19° Right
		Stabilator 8° Up 3° Down
	See NOTE 4 for rudder and stabilator balance weights.	
<u>Serial Numbers Eligible</u>	27-2505 through 27-4916, and 27-7304917 through 27-7554168. For S/N 27-7654001 through 27-8154030, see Section VI.	
	See NOTE 9 for airworthiness certification eligibility in the United States.	
<u>Required Equipment</u>	In addition to the pertinent required basic equipment specified in CAR 3, the following items of equipment must be installed:	
	S/N 27-2505 through 27-3836, 27-3838 thorough 27-3943:	
	Items 1(i) or 1(j); 2(e); 3(c); 101(f); 102(f) or 102(g); 103(e); 105(h) or 105(i); 106(e), 106(f), 106(g) or 106(h); 114; 201(c) or 201(d); 202(b) or 202(c); 205(b); 206; 302(c); 304(b) or 304(e); 305(a); 401(bh); 601(c); 603(b); 608(c); 612; 614(a); 617; and 618.	
	S/N 27-3944 through 27-4425, 27-4427 through 27-4573:	
	Items 1(i) or 1(j); 2(e); 3(c); 101(f); 102(f) or 102(g); 103(e); 105(h) or 105(i); 106(e), 106(g) or 106(h); 114; 201(d); 202(b) or 202(c); 205(b); 206; 302(c); 304(b) or 304(e); 305(b); 401(ca); 601(c); 603(b); 608(c); 612; 614(b); 617; and 618.	
	S/N 27-4574 through 27-4916, and 27-7304917 through 27-7554168:	
	Items 1(i) or 1(j); 2(e); 3(c); 101(f); 102(f); 103(e); 104(c); 105(i); 106(e) or 106(h); 114(a); 201(d); 202(b) or 202(c); 205(b); 206; 302(f); 304(b), 304(e) or 306(b); 401(cm); 601(c); 603(b); 608(c); 612; 617; and 618.	

VI. - Model PA-23-250, 6 PCLM, (Normal Category), Approved January 21, 1975.

Same as Model PA-23-250 (6 PCLM), S/N 27-2505 through 27-4916, and 27-7304917 through 27-7554168, at 5,200 lb. maximum weight except required equipment.

<u>Engines</u>	2 Lycoming I-540 series (See Item 113C)		
<u>Fuel</u>	91/96 minimum grade aviation gasoline		
<u>Engine Limits</u>	All operations 2575 r.p.m. (250 hp)		
<u>Airspeed Limits</u>	V _{ne}	Never exceed	249 mph (216 knots)
<u>(CAS)</u>	V _{no}	Maximum structural cruise	198 mph (172 knots)
	V _{le}	Landing gear extended	150 mph (130 knots)
	V _p	Maneuvering	149 mph (129 knots)
	V _{fe}	Flaps extended (full down)	125 mph (109 knots)
	V _{fe}	Flaps extended (¼ down)	160 mph (139 knots)
	V _{fe}	Flaps extended (½ down)	140 mph (122 knots)

<u>Center of Gravity Range</u> (Gear Extended)	(+99.0) to (+100.5) at 5,200 lb. (+97.0) to (+100.5) at 5,000 lb. (+87.6) to (+100.5) at 3,540 lb. or less Straight line variation between points given. See NOTE 8 for eligibility for extended C. G. range. Moment due to retraction of landing gear is - 760 in.-lb.
<u>Empty Weight C.G. Range</u>	None
<u>Maximum Weight</u>	5,200 lb. - Takeoff 4,940 lb. - Landing Maximum permissible weight with zero fuel: 4,400 lb. (normally aspirated) 4,500 lb. (turbocharged)
<u>No. of Seats</u>	6 (2 at +89, 2 at +126.5, 2 at +157)
<u>Maximum Baggage</u>	150 lb. at (+10) (forward compartment) 150 lb. at (+183) (rear compartment)
<u>Fuel Capacity</u>	144 gallons at (+113) (4 tanks, 2 in each wing, each tank 36 gallons) (Each tank 34.3 gallons usable) See NOTE 1 for unusable fuel data. See Item 107(b) for optional fuel tanks.
<u>Oil Capacity</u>	6 gallons at (+55) (3 gallons each engine)
<u>Control Surface</u> <u>Movements</u>	Main Surfaces Aileron 30° Up 15° Down Stabilator (L.E.) 9° Up 9° Down Rudder 30° Left 35° Right Flaps

Specifications Pertinent to All Models

<u>Datum</u>	80 inches ahead of the wing leading edge outboard of tapered sections.
<u>Leveling Means</u>	Level from two rivnuts located right side of fuselage under stabilizer.
<u>Certification Basis</u>	Type Certificate No. 1A10 (CAR 3, dated November 1, 1949, including Amendments 3-1 through 3-9, dated December 15, 1952) S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030: CAR 3.242(a) as amended by Amendment 3-14, dated March 13, 1956, superseding original CAR 3.242.
<u>Production Basis</u>	Approved for manufacture of spare parts only under Production Certificate Number 206.
<u>Equipment</u>	A plus (+) or minus (-) sign preceding the weight of an item indicates net weight change when that item is installed. Approval for the installation of all items of equipment listed herein has been obtained by the aircraft manufacturer except those items preceded by an asterisk (*). The asterisk denotes that approval has been obtained by someone other than the aircraft manufacturer. An item marked with an asterisk may not have been manufactured under an FAA monitored or approved quality control system, and therefore conformity must be determined if the item is not identified by an FAA Form 8130-3, FAA-PMA or other evidence of FAA production approval.

Propellers and Propeller Accessories

			PA-E23-250
			PA-23 PA-23-235
			<u>PA-23-160</u> <u>PA-23-250</u>
1. Two full feathering, constant speed propeller installations			
(a) Hartzell HC-82XG-2 with 7636D blades (Not eligible for Models PA-23 or PA-23-160, S/N 23-1068, and 23-1152 through 23-2046). Pitch settings at 30 in. station: Low 10°, High 80.5° (feathered). Diameter: Not over 76 inches, not under 74.5 inches.	63 lb. ea.	(+35)	----
(b) Hartzell HC-82XG-2B with 7636D-4 blades. Pitch settings at 30 in station: Low 12°, High 80° (feathered). Diameter: Not over 72 inches, not under 70 inches. Item 401(j) required with Model PA-23 only.	63 lb. ea.	(+35)	----
(c) Hartzell HC-82XL-2B with 7636D-4 blades. Pitch settings at 30 in station: Low 12°, High 80° (feathered). Diameter: Not over 72 inches, not under 70 inches. Item 401(j) required with Model PA-23 only.	63 lb. ea.	(+35)	----
(d) Hartzell HC-82XL-2C with 7636D-4 blades. Pitch settings at 30 in station: Low 12°, High 80° (feathered). Diameter: Not over 72 inches, not under 70 inches. Item 401(j) required with Model PA-23 only.	63 lb. ea.	(+35)	----
(e) Hartzell HC-82XK-2C1 with 8433-10 blades. Pitch settings at 30 in station: Low 15.5°, High 80° (feathered). Diameter: Not over 74 inches, not under 73 inches. Not eligible on Model PA-23-250, S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030.	66 lb. ea.	----	(+29)

Propellers and Propeller Accessories (continued)

		PA-23 PA-23-160	PA-E23-250 PA-23-235 PA-23-250
(f)	Hartzell HC-A2XK-2 with 8433-10 blades. Pitch settings at 30 in station: Low 15.5°, High 80° (feathered). Diameter: Not over 74 inches, not under 73 inches. Not eligible on Model PA-23-250, S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030.	66 lb. ea. ----	(+29)
(g)	Hartzell HC-A2XL-2 with 7636D-4 blades. Pitch settings at 30 in station: Low 12°, High 80° (feathered). Diameter: Not over 72 inches, not under 70 inches.	63 lb. ea. (+35)	----
(h)	Hartzell HC-A2XL-2 with 8433B-10 blades (24-v system. only). Pitch settings at 30 in station: Low 15.5°, High 80° (feathered). Diameter: Not over 74 inches, not under 73 inches. Item 401(w) and NOTE 2 (p) placard required. Eligible only on Model PA-23-250, S/N 27-1 through 27-1999.	67.5 lb. ea. ----	(+29)
(i)	Hartzell HC-E2YK-2RB with 8465-7R blades. Pitch settings at 30 in station: Low 14.5°, High 80° (feathered). Diameter: Not over 77 inches, not under 76 inches. Eligible only on Models PA-23-250 and PA-E23-250, S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030. Not eligible when Item 113C(g), 113C(h), or 113C(i) is installed. Not to be intermixed with Item 1(l), 1(m), or 1(o).	58.5 lb. ea. ----	(+24)
(j)	Hartzell HC-E2YR-2RB with 8465-7R blades. Pitch settings at 30 in. sta.: Low 14.5°, High 80° (feathered). Diameter: Not over 77 inches, not under 76 inches. Eligible only on Models PA-23-250 and PA-E23-250, S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030. Not eligible when Item 113C(g), 113C(h), or 113C(i) is installed. Not to be intermixed with Item 1(l), 1(m), or 1(o).	58.5 lb. ea. ----	(+24)
(k)	Hartzell HC-E2YR-2RB with 8465-7R blades. Pitch settings at 30 in. station: Low 15.2°, High 80° (feathered). Diameter: Not over 77 inches, not under 76 inches. Eligible only when 113C(g) is installed. Not to be intermixed with Item 1(n) or 1(p).	58.5 lb. ea. -----	(+24)
(l)	Hartzell HC-E2YK-2RBS with 8465-7R blades. Pitch settings at 30 in. station: Low 14.5°, High 80° (feathered). Diameter: Not over 77 inches, not under 76 inches. Eligible only on Models PA-23-250 and PA-E23-250, S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030. Not eligible when Item 113C(g), 113C(h), or 113C(i) is installed. Not to be intermixed with Items 1(i), 1(j), or 1(o).	60.25 lb. ea. ----	(+24)
(m)	Hartzell HC-E2YR-2RBS with 8465-7R blades. Pitch settings at 30 in. station: Low 14.5°, High 80° (feathered). Diameter: Not over 77 inches, not under 76 inches. Eligible only on Models PA-23-250 and PA-E23-250, S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030. Not eligible when Item 113C(g), 113C(h), or 113C(i) is installed. Not to be intermixed with Items 1(i) or 1(j).	60.25 lb. ea. -----	(+24)

Propellers and Propeller Accessories (continued)

		PA-23 <u>PA-23-160</u>	PA-E23-250 PA-23-235 <u>PA-23-250</u>
(n) Hartzell HC-E2YR-2RBS with 8465-7R blades. Pitch settings at 30 in station: Low 15.2°, High 80° (feathered). Diameter: Not over 77 inches, not under 76 inches. Eligible only when Item 113C(g) is installed. Not be intermixed with Item 1(k).	60.25 lb. ea.	----	(+24)
(o) Hartzell HC-E2YR-2RBSF with F8465-7R blades. Pitch settings at 30 in station: Low 14.5°, High 80° (feathered). Diameter: Not over 77 inches, not under 76 inches. Eligible only on Models PA-23-250 and PA-E23-250, S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030. Not eligible when Item 113C(g) or 113C(i) is installed. Not to be intermixed with Items 1(i) or 1(j).	60.25 lb. ea.	----	(+24)
(p) Hartzell HC-E2YR-2RBSF with F8465-7 blades. Pitch settings at 30 in. station: Low 15.2°, High 80° (feathered). Diameter: Not over 77 inches, not under 76 inches. Eligible only when Item 113C(g) or 113C(i) is installed. Not to be intermixed with Item 1(i), 1(j), 1(k), or 1(n).	58.5 lb. ea.	----	(+24)
(q) Hartzell HC-E2YR-2RBSF with F8465-7R blades. Pitch settings at 30 in. station: Low 15.2°, High 80° (feathered). Diameter: Not over 77 inches, not under 76 inches. Eligible only when Item 113C(g) or 113C(i) is installed. Not to be intermixed with Item 1(k).	60.25 lb. ea.	-----	(+24)
(r) Hartzell HC-E2YR-2RBF with F8465-7R blades. Pitch settings at 30 in. station: Low 15.2°, High 80° (feathered). Diameter: Not over 77 inches, not under 76 inches. Eligible only when Item 113C(g) or 113C(i) is installed. Not to be intermixed with Item 1(q).	58.5 lb. ea.	-----	(+24)
2. Two hydraulic governors			
(a) Woodward hydraulic governor assembly 210080	3 lb. ea.	(+68.5)	-----
(b) Hamilton Standard hydraulic governor assembly Model 1012 per Hartzell Modification B2. Not eligible for Models PA-23 or PA-23-160, S/N 23-1068, and 23-1152 through 23-2046.	3 lb. ea.	(+68.5)	-----
(c) Hartzell hydraulic governor assembly Model B-4-1 Not eligible for Model PA-23.	4 lb. ea.	(+68.5)	-----
(d) Hartzell hydraulic governor assembly Model B-4. Not eligible on Model PA-23-250; S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030; and Model PA-E23-250.	4 lb. ea.	-----	(+37)
(e) Hartzell hydraulic governor assembly Model F-6-5, F-8-5S or F-6-5A. Eligible only on Model PA-23-250; S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030; and Model PA-E23-250 equipped with standard deck engines.	6 lb. ea.	-----	(+37)
(f) Hartzell hydraulic governor assembly Model F-6-28 or F-8-28. Eligible only on Model PA-23-250; S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030; and Model PA-E23-250 when equipped with wide deck engines (Lycoming engines having the Suffix "A" on the engine S/N such as L-XXXXX-XXA).	6 lb. ea.	-----	(+37)

Propellers and Propeller Accessories (continued)

			PA-23 PA-23-160	PA-E23-250 PA-23-235 PA-23-250
3.	Two propeller spinners			
(a)	Hartzell spinner dome C-888 and bulkhead adapter C-885.	3 lb. ea.	(+35)	-----
(b)	Piper spinner P/N 16443 and bulkhead P/N 16444. Not eligible on Model PA-23-250; S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030; and Model PA-E23-250.	3 lb. ea.	(+35)	(+29)
(c)	Piper spinner P/N 23818, cap assembly P/N 23819 and bulkhead adapter. Eligible only on Model PA-23-250; S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030; and Model PA-E23-250 when Item 1(i), 1(j) or 1(k) is installed.	4 lb. ea.	-----	(+24)
(d)	Piper spinner P/N 23818, cap assembly P/N 23819-4 and bulkhead adapter. Eligible only on Model PA-23-250; S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030; and Model PA-E23-250 when Item 1(l), 1(m), 1(n), 1(o), or 1(p) is installed.	4 lb. ea.	-----	(+24)

Engine and Engine Accessories

101.	Fuel pumps - electric auxiliary			
(a)	Bendix Model 476087 (1 each engine).	2 lb. ea.	(+89)	-----
(b)	Bendix Model 478360 (1 each engine for PA-23, PA-23-160) (2 each engine for PA-23-250 and PA-23-235). Not eligible for use when Item 113C(d), 113C(e), 113C(f), 113C(g), 113C(h), or 113C(i) is installed.	2 lb. ea.	(+89)	(+72)
(c)	Bendix Model 480500 (2 each engine) (24v system. only). Eligible only on Model PA-23-250. Not eligible for use when Item 113C(d), 113C(e), 113C(f), 113C(g), 113C(h), or 113C(i) is installed.	2 lb. ea.	-----	(+72)
(d)	Weldon Model 8110-A (1 each engine for Model PA-23-250) Eligible only when Item 113C(d) is installed.	3 lb. ea.	-----	(+90)
(e)	Weldon Model 8001-B (1 each engine for Model PA-23-250) (24v system. only). Eligible only when Item 113C(d) is installed.	3 lb. ea.	---	(+90)
(f)	Weldon Model A8001-A, AA8001-A or B-8001-C Piper P/N 33127 (1 each engine for Models PA-23-250 and PA-E23-250). Eligible only when Item 113C(e), 113C(f), or 113C(g) is installed.	3 lb. ea.	-----	(+90)
(g)	Piper P/N 33327 (1 each engine eligible and required for Models PA-23-250 and PA-E23-250 equipped with Item 307).	3 lb. ea.	-----	(+90)
102.	Two fuel pumps - engine driven			
(a)	AC type AH No. 5594068	3 lb. ea.	(+66)	-----
(b)	AC type BF No. 5594605. Not eligible with Item 113C(d), 113C(e), 113C(f), 113C(g), 113C(h), or 113C(i).	4 lb. ea.	-----	(+66)
(c)	AC No. 5623467 (Lycoming P/N 74082). Not eligible with Item 113C(d), 113C(e), 113C(f), 113C(g), 113C(h), or 113C(i).	1.5 lb. ea.	(+66)	(+66)
(d)	AC No. 5656880. Not eligible with Item 113C(d), 113C(e), 113C(f), 113C(g), 113C(h), or 113C(i).	1.5 lb. ea.	(+66)	(+66)

Engine and Engine Accessories (continued)

		PA-23 PA-23-160	PA-E23-250 PA-23-235 PA-23-250
(e)	AC No. 5656696A (Lycoming P/N 73870) or AC No. 6440160 (Lycoming P/N 74999). Required and eligible only when Item 113C(d) is installed.	2 lb. ea. -----	(+66)
(f)	AC No. 5656999 (Lycoming P/N 75131) or AC No. 6440296 or 6440652 (Lycoming P/N 75247). Required and eligible only when Item 113C(e) or 113C(h) is installed.	2 lb. ea. -----	(+66)
(g)	Lear Siegler No. RG-17980. Required and eligible only when Item 113C(f), 113C(g) or 113C(i) is installed.	1.25 lb. ea. -----	(+66)
(h)	AC No. 6440174 (Lycoming P/N 75148) or AC No. 6440295 (Lycoming P/N 75246). Not eligible when Item 113C(d), 113C(e), 113C(f) or 113C(h) is installed.	1.25 lb. ea. -----	(+66)
103. Two oil radiators			
(a)	Harrison Model APO7AUO5-01. (Bottom cowl assembly No. 18610 required). Not eligible for Models PA-23 or PA-23-160, S/N 23-1068, 23-1152 through 23-2046.	3 lb. ea. (+73)	-----
(b)	Harrison Model APO7AUO6-02.	3 lb. ea. (+73)	-----
(c)	Harrison Model APO7AUO6-03.	3 lb. ea. (+73)	-----
(d)	Harrison Model APO9AUO6-03. Not eligible on Model PA-23-250; S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030; and Model PA-E23-250.	3 lb. ea. -----	(+83)
(e)	Harrison Model APO9AUO6-02. Eligible only on Model PA-23-250; S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030; and Model PA-E23-250. Not eligible when Item 113C(g) or Item 113C(i) is installed.	3 lb. ea. -----	(+66)
(f)	Harrison Model AP13AUO6. Eligible and required only when Item 113C(g) or Item 113C(i) is installed.	3 lb. ea. -----	(+70)
(g)	Harrison Model APO9AUO6-04. Not eligible when Item 113C(g) or 113C(i) is installed. Eligible only on Model PA-23-250.	3 lb. ea. -----	(+70)
104. Vacuum Pump			
(a)	Pesco Model 3P-194-F type B-11 (One for Models PA-23 and PA-23-160, two for Models PA-23-250 and PA-23-235). Not eligible on Model PA-23-250; S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030; and Model PA-E23-250.	4 lb. ea. (+65.5)	(+66)

Engine and Engine Accessories (continued)

		PA-23 PA-23-160 (+65.5)	PA-E23-250 PA-23-235 PA-23-250 (+66)
104. (b)	Garwin Model G-455L (One for Models PA-23 and PA-23-160, two for Models PA-23-250 and PA-23-235). Not eligible on Model PA-23-250; S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030; and Model PA-E23-250.	4 lb. ea.	(+65.5)
(c)	Airborne Mechanisms Model 113A5 or 200CC (One for Models PA-23 and PA-23-160, two for Models PA-23-250, PA-23-235 and PA-E23-250).	4 lb. ea.	(+65.5)
(d)	Airborne Mechanisms Model No. 211CC. (Two for Models PA-23-250 and PA-E23-250).	1.8 lb. ea.	-----
(e)	Airborne Mechanisms Model No. 431CC7 (Two for Models PA-23-250 and PA-E23-250).	5.7 lb. ea.	-----
(f)	Airborne Mechanisms Model No. 441CC (Two for Models PA-23-250 and PA-E23-250).	2.9 lb. ea.	-----
105. Two starters			
(a)	Delco-Remy Model 1109657 (Direct Drive) (12v). Not eligible for Models PA-23 or PA-23-160, S/N 23-1068, and 23-1152 through 23-2046.	17 lb. ea.	(+48)
(b)	Delco-Remy Model 1109673 (geared) or 1109689 (12v).	18 lb. ea.	(+48)
(c)	Delco-Remy Model 1109679 (geared 3.88:1) or 1109688 (12v). Not eligible for use with Items 113C(d), 113C(e), 113C(f), 113C(g) 113C(h), or 113C(i).	18 lb. ea.	-----
(d)	Delco Remy Model 1109695 (geared 3.38:1) (12v). Eligible for use with Items 113C(a), 113C(b), or 113C(d).	18 lb. ea.	-----
(e)	Delco-Remy Model 1109696 (geared 3.38:1) (24v system only). Eligible only on S/N 27-1 through 27-1999.	18 lb. ea.	-----
(f)	Delco-Remy Model 1109504 (geared 3.38:1) (12v). Eligible for use with Items 113C(a), 113C(b), or 113C(d).	18 lb. ea.	-----
(g)	Delco-Remy 1109505 (geared 3.38:1) (24v system only). Not eligible on Model PA-23-235; Model PA-23-250, S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030; or Model PA-E23-250.	18 lb. ea.	-----
(h)	Delco-Remy 1109511 (geared 3.38:1) (12v). Eligible for use with Items 113C(a), 113C(b), 113C(d), 113C(e), or 113C(f).	18 lb. ea.	----
(i)	Prestolite Model MZ-4206 (geared 3.38:1) (12v). Eligible for use with Items 113C(e), 113C(f), 113C(g), and 113D(a).	17 lb. ea.	----
(j)	Prestolite Model MHB-4001 (geared 3.38:1) (28 v). Eligible for use with Item 113.C(h) or 113.C(i).	18 lb. ea.	----
106. One hydraulic pump			
(a)	New York Air Brake Model 67BO25 Not eligible on Model PA-23-250, S/N 27-7654001 through 27-8154030.	2 lb.	(+66)
(b)	Pesco Model 012151-011-01	2 lb.	(+66)

Engine and Engine Accessories (Continued)

		PA-23		PA-E23-250
		PA-23-160	PA-23-235	PA-23-250
106. (c)	Pesco Model 1P677	2 lb.	(+66)	-----
(d)	Pesco Model 012023-014	2 lb.	(+66)	-----
(e)	Pesco Model 012023-015 Not eligible on Model PA-23-250, S/N 27-7654001 through 27-8154030.	2 lb.	-----	(+68.5)
(f)	Pesco Model 1P677CCW (Karnish No. 4266) Not eligible on Model PA-23-250, S/N 27-7654001 through 27-8154030.	2 lb.	-----	(+68.5)
(g)	Eastern Industries Model 1235 HBG, Type 263 Not eligible on Model PA-23-250, S/N 27-7654001 through 27-8154030.	2 lb.	-----	(+68.5)
(h)	Eastern Industries Model 1233 HNG 284. Eligible only on S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030.	2 lb.	-----	(+68.5)
107. (a)	Auxiliary fuel tanks - 36 gallons (one 18 gallon tank each wing installed in accordance with Piper Dwg. 18623). Item 401(f) or 401(g) and NOTE 2(e) placard required.	+18 lb.	(+112)	----
(b)	20 gallon tank in each wing tip, installed per Piper Dwg. 33826-2 and 33826-3. Eligible only on Model PA-23-250, S/N 27-7654001 through 27-8154030.	+13.7 lb.	-----	(+106.7)
108.	Auxiliary Vacuum Pump			
(a)	Pesco Model 3P-194-F, Type B-11 or Garwin Model G-455L installed in accordance with Piper Dwg. 18639 or 19571. Item 401(k) and NOTE 2(k) placard required.	+10 lb.	(+69)	-----
(b)	Airborne Mechanisms Models 113A5 installed in accordance with Piper Dwg. 19980. Item 401(k) and NOTE 2(k) placard required.	+10 lb.	(+69)	-----
109.	Revised carburetor air heater installed per Piper Dwg. 18250, Revision AE. Not eligible for Models PA-23 and PA-23-160, S/N 23-1068, and 23-1152 through 23-2046.	Negligible Wt. Change	Eligible	-----
110.	Hi-Temp carburetor heater installed per Piper Dwg. 18250, Revision AX or Piper Dwg. 18250, Revision BX.	Negligible Wt. Change	Eligible	-----
111.	Carburetor air box assemblies Piper P/N 19318-6 (left) and P/N 19318-7 (right) installed in accordance with Piper Dwg. 18250, Revision BJ. Not eligible for Models PA-23 or PA-23-160, S/N 23-1 through 23-1067, and 23-1069 through 23-1151.	Negligible Wt. Change	Eligible	-----
112.	Ejector tube flange, Piper P/N 19146, installed in accordance with Piper Dwg. No. 17913, Revision CA. Not eligible for Models PA-23 or PA-23-160, S/N 23-1 through 23-1067, and 23-1069 through 23-1151.	Negligible Wt. Change	Eligible	-----

Engine and Engine Accessories (Continued)

		PA-23 PA-23-160	PA-E23-250 PA-23-235 PA-23-250
113. Engine (Lycoming)			
A. Model PA-23			
(a) O-320-A1A	Negligible Wt. Change	Eligible	----
(b) O-320-A1B	Negligible Wt. Change	Eligible	----
(c) O-320-A3A	Negligible Wt. Change	Eligible	----
(d) O-320-A3B	Negligible Wt. Change	Eligible	----
B. Model PA-23-160			
(a) O-320-B1A	Negligible Wt. Change	Eligible	----
(b) O-320-B1B	Negligible Wt. Change	Eligible	----
(c) O-320-B3A	Negligible Wt. Change	Eligible	----
(d) O-320-B3B	Negligible Wt. Change	Eligible	----
(e) O-320-C1A, Item 401(q) required	Negligible Wt. Change	Eligible	----
(f) O-320-C1B, Item 401(q) required	Negligible Wt. Change	Eligible	----
(g) O-320-C3A, Item 401(q) required	Negligible Wt. Change	Eligible	----
(h) O-320-C3B, Item 401(q) required	Negligible Wt. Change	Eligible	----
C. Models PA-23-250 and PA-E23-250			
(a) O-540-A1B5. Carburetor Setting No. 10-4057-1 or 10-4404. Not eligible on Model PA-23-250; S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030; and Model PA-E23-250.	Negligible Wt. Change	-----	Eligible
(b) O-540-A1D5 (12v or 24v system). Carburetor Setting No. 10-4057-1 or 10-4404. Not eligible on Model PA-23-250, S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030; and Model PA-E23-250.	Negligible Wt. Change	-----	Eligible
(c) O-540-A3D5 (24v system only). Carburetor Setting Nos. 10-4057-1 or 10-4404. Eligible only on Model PA-23-250, S/N 27-1 through 27-1999.	Negligible Wt. Change	-----	Eligible
(d) IO-540-C1B5 (12v or 24v system). Bendix Fuel Injector No. RSA-5AD1. Installed in accordance with Piper Drawing No. No. 30980. Items 101(d) or 101(e), 102(e), 401(ap), 608(c), 614 and NOTE 2(t) placard required. Items 402(f) or 402(h) only heater eligible with this installation. Eligible on Model PA-23-250, S/N 27-2000 through 27-2504.	Negligible Wt. Change	-----	Eligible

Engine and Engine Accessories (Continued)

			PA-23 PA-23-160	PA-E23-250 PA-23-235 PA-23-250
113C(e)	IO-540-C4B5 (12v system only). Bendix Fuel Injector No. RSA-5AD1. Installed in accordance with Piper Drawing No. 31470. Items 402(f), 402(i) or 402(j) only heaters eligible with this installation. NOTES 2(t), 2(u), 2(v) placards required. Eligible on Model PA-23-250, S/N 27-2505 through 27-4916, and 27-7304917 through 27-7554168; and Model PA-E23-250. Not eligible on Model PA-23-250, S/N 27-7654001 through 27-8154030.	Negligible Wt. Change	-----	Eligible
(f)	IO-540-C1B5 (12 v system only). Bendix Fuel Injector No. RSA-5AD1 with AiResearch Turbocharger, STC No. SE22WE, dated May 14, 1965. Item 623 required. Eligible on Model PA-23-250, S/N 27-2505 through 27-4916, and 27-7304917 through 27-7554168; and Model PA-E23-250. Not eligible on Model PA-23-250, S/N 27-7654001 through 27-8154030.	Negligible Wt. Change	-----	Eligible
(g)	TIO-540-C1A (12 v system only). Bendix Fuel Injector No. RSA-5AD1 Installed in accordance with Piper Drawing No. 32330. Item 402(i) or 420(j) are only heaters eligible with this installation. NOTES 2(t), 2(u), 2(ac) and 2(ad) placards required. Eligible on Model PA-23-250, S/N 27-3837, 27-3944 through 27-4916, and 27-7304917 through 27-7554168; and Model PA-E23-250. Not eligible on Model PA-23-250, S/N 27-7654001 through 27-8154030.	Use actual Wt. & Arm	-----	Eligible
(h)	IO-540-C4B5 (28 v system only). Bendix Fuel Injector No. RSA-5AD1 Item 402(k) only heater eligible with this installation. NOTES 2(t) and 2(v) placards required. Eligible on Models PA-23-250 and PA-E23-250 when equipped with Item 307.	Use Actual Wt. & Arm	-----	Eligible
(i)	TIO-540-C1A (28 v system only). Bendix Fuel Injector No. RSA-5AD1 Installed in accordance with Piper Drawing 32330-5. Item 402(k) is only heater eligible with this installation. NOTES 2(t), 2(u), 2(ac), and 2(ad) placards required. Eligible on Model PA-23-250, S/N 27-4426, 27-4574 through 27-4916, and 27-7304917 through 27-8154030.	Use Actual Wt. & Arm	-----	Eligible
D.	Model PA-23-235			
(a)	O-540-B1A5	Negligible Wt Change	-----	Eligible
114.	Two Induction Air Filters			
(a)	Piper P/N 32198. (Eligible only when Item 113C(e) or 113C(h) is installed).	.5 lb. ea.	-----	(+74)
(b)	Piper P/N 26874. (Eligible only when Item 113C(g) or 113C(i) is installed).	1 lb. ea.	-----	(+66)
115.	Two Oil Filters			
A. C.	Full Flow and Adapter Assembly Kit (A.C. P/N 5578941; Lycoming P/N 75528). Eligible only when Item 113C(e), 113C(f), 113C(g), 113C(h), 113C(i), or 113D is installed.	1.77 lb. ea.	-----	(+67)

			PA-23 PA-23-160	PA-E23-250 PA-23-235 PA-23-250
<u>Landing Gear</u>				
201. Two Main wheel-brake assemblies, 6.00-6, Type III				
(a) Goodrich Model G-14-891 Wheel Assembly G-3-787 or G-3-880 Brake Assembly G-2-622 Not eligible for Models PA-23 and PA-23-160, S/N 23-1068, 23-1152 through 23-2046.	10 lb. ea.	(+114.5)	-----	
(b) Cleveland Wheel Assembly Model 3060 or 3080A Brake Assembly Model 3000-500	11 lb. ea.	(+114.5)	-----	
(c) Cleveland Wheel Assembly Model 3080B only with Brake Assembly Model 37-200. Not eligible on Models PA-23-250 and PA-E23-250, S/N 27-7654001 through 27-8154030.	15 lb. ea.	-----		(+114.5)
(d) Cleveland Wheel Assembly Model 3080C or 3080D only with Brake Assembly Model 37-200A. Not eligible on Models PA-23-250 and PA-E23-250, S/N 27-7654001 through 27-8154030.	15 lb. ea.	-----		(+114.5)
(e) Cleveland Wheel Assembly Model 3080B-1 only with Brake Assembly Model 37-200-2. Not eligible on Models PA-23-250 and PA-E23-250, S/N 27-7654001 through 27-8154030.	15 lb. ea.	-----		(+114.5)
(f) Cleveland Wheel Assembly Model 40-131 with Brake Assembly Model 30-96.	15 lb. ea.	-----		(+114.5)
202. Two Main Tires				
(a) 6-ply rating, Nylon, 7.00-6 Type III, with regular tubes	12 lb. ea.	(+114.5)	-----	
(b) 8-ply rating, Nylon 7.00-6 Type III, with regular tubes (heavy duty)	13 lb. ea.	-----		(+114.5)
(c) 8-ply rating, Nylon 7.00-6 Type III, with regular tubes	11 lb. ea.	-----		(+114.5)
205. One nose wheel, 6.00-6 Type III				
(a) Cleveland Wheel Assembly C-38500H (Less Brake drum Model DHB-3).	5 lb.	(+24.5)	-----	
(b) Cleveland Wheel Assembly 38501. Not eligible on Model PA-23-250, S/N 27-7654001 through 27-8154030.	5 lb.	(+24.5)		(+24.5)
(c) Cleveland Wheel Assembly 40-76(B)	3.8 lb.	(+24.5)		(+24.5)
206. One nose wheel tire				
(a) 4-ply rating, 6.00-6 Type III, with regular tube	9 lb.	(+24.5)		(+24.5)
(b) 6-ply rating, 6.00-6 Type III, with regular tube (See NOTE 5 and NOTE 7).	9.3 lb.	-----		(+24.5)

		PA-E23-250	
		PA-23	PA-23-235
		<u>PA-23-160</u>	<u>PA-23-250</u>
<u>Electrical Equipment</u>			
301. Generators			
(a)	One 35 amp. generator, Delco-Remy, 12v, with bracket.	18 lb.	(+45) -----
(b)	Dual 35 amp. generators, Delco-Remy, 12v, with brackets and relays (Item 401(c) or (d) required with this installation).	23 lb.	(+52) -----
(c)	One 50 amp. generator, 12v, Delco-Remy No. 1101915 with regulator, Delco-Remy No. 119246 and brackets.	18 lb.	(+45) -----
(d)	Dual 50 amp. generator, 12v, Delco-Remy No. 1101915 with regulator, Delco-Remy No. 1119246, brackets and relays. Not eligible on Model PA-23-250, S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030; and Model PA-E23-250.	41 lb.	(+49) (+44)
(e)	Dual 25 amp. generator, 24v, Delco-Remy No. 1101905 with regulator, Delco-Remy 118976, bracket and relays (24v system only). Eligible only on Model PA-23-250, S/N 27-1 through 27-1999.	50 lb.	----- (+44)
(f)	Dual 50 amp. generators, 24v, Delco-Remy No. 1105055 with regulator Delco-Remy No. 1119656, bracket and relays (24v system only). Not eligible on Model PA-23-235; Model PA-23-250, S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030; and Model PA-E23-250.	55 lb.	----- (+44)
302. Battery			
(a)	One Reading R-33 or Bowers B-34, 33 amp.-hr, 12 v; or Reading R-35, 35 amp.-hr, 12v. Not eligible on Model PA-23-250, S/N 27-2000 through 27-4916, and 27-7304917 through 27-8154030.	27 lb.	(+40.5) (+40.5)
(b)	Reading S-24, two 12v 24 amp.-hr. in series (24v system only). Eligible only on Model PA-23-250, S/N 27-1 through 27-2504.	43 lb.	----- (+29)
(c)	One Reading R-35, 35 amp.-hr. or Bowers B-34, 33 amp.-hr. 12v Eligible only on Model PA-23-250, S/N 27-2000 through 27-4916, and 27-7304917 through 27-8154030; and Model PA-E23-250.	27 lb.	----- (+34)
(d)	One Gill No. 12-GCAB-9, 17 amp.-hr, 24v. Eligible only on Models PA-23-250 and PA-E23-250 when equipped with Item 307.	28 lb.	----- (+33.0)
(e)	One Gill No. PS12-24, 25 amp.-hr., 24v. Eligible on Model PA-23-250, S/N 27-7654001 through 27-8154030.	44 lb.	----- (+34)
303. One Landing Light			
(a)	Model 4509 (100w).	2 lb.	(+11.5) -----
(b)	Model 4522 (250w) per Piper Drawing 19327. Not eligible on Model PA-23-250, S/N 27-2000 through 27-4916, and 27-7304917 through 27-8154030; and Model PA-E23-250.	2 lb.	(+11.5) (+11.5)
(c)	Model 4533 (250w) per Piper Drawing 19327 (24v system only). Eligible only on Model PA-23-250, S/N 27-1 through 27-1999.	2 lb.	----- (+11.5)
(d)	Model 4522 (25w) per Piper Drawing 30521. Eligible only on Models PA-23-250 and PA-E23-250, S/N 27-2000 through 27-4425, and 27-4427 through 27-4573.	2 lb.	----- (-18.5)

Electrical Equipment (Continued)

		PA-E23-250	
		PA-23	PA-23-235
		<u>PA-23-160</u>	<u>PA-23-250</u>
303. (e)	Model 4533 (250w) per Piper Drawing 31163 (24v system only). Eligible only on Model PA-23-250, S/N 27-2000 through 27-2504.	2 lb.	----- (-18.5)
(f)	Model 4522 (250w) per Piper Drawing 33030. Eligible only on Models PA-23-250 and PA-E23-250, S/N 27-4426, 27-4574 through 27-4916, and 27-7304917 through 27-7554168.	2 lb.	----- (-15.6)
(g)	Model 4553 (250w) per Piper Drawing 33320 or 33650-2 (28v system only).	2 lb.	----- (-15.6)
304.	Rotating Beacon (See NOTE 4)		
(a)	Grimes No. D7080-1-12 or No. D7080A-1-12 installed in accordance with Piper Drawing 18714 or 19681.	2 lb.	(+292) -----
(b)	Grimes No. D7080-1-12 or No. D7080A-1-12 installed in accordance with Piper Drawing 16330, 30470, 31480, or 32664. Not eligible on Model PA-23-250, S/N 27-7654001 through 27-8154030.	2 lb.	----- (+310)
(c)	Grimes No. D7080-1-24 or No. D7080A-1-24 installed in accordance with Piper Drawing 30090 (24v system only). Eligible only on Model PA-23-250, S/N 27-1 through 27-1999.	2 lb.	----- (+310)
(d)	Whelen WRM-12 installed in accordance with Piper Drawing 19681.	2 lb.	(+292) -----
(e)	Whelen WRM-12 installed in accordance with Piper Drawing 16330, 30407, 31480, or 32664. Not eligible on Model PA-23-250, S/N 27-7654001 through 27-8154030.	2 lb.	----- (+310)
(f)	Whelen WRM-24 installed in accordance with Piper Drawing 31163 (24v system only). Eligible only on Model PA-23-250, S/N 27-2000 through 27-2504.	2 lb.	----- (+310)
(g)	Whelen WRM-24 installed in accordance with Piper Drawing 33320 (28v system only). Not eligible on Model PA-23-250, S/N 27-7654001 through 27-8154030.	2 lb.	----- (+310)
305.	Dual Alternators		
(a)	12v, 70 amp. Delco-Remy 1100717 (Lycoming P/N 74319), including relays and filers. Eligible only on Model PA-23-250, S/N 27-2505 through 27-3836, 27-3838 through 27-3943; and Model PA-E23-250, S/N 27-2505 through 27-3836, 27-3838 through 27-3943.	32 lb.	----- (+37)
(b)	12v, 70 amp. Prestolite P/N ALX 8403 (Lycoming P/N 78310), including relays and filters. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-3837, 27-3944 through 27-4916, and 27-7304917 through 27-7554168.	32 lb.	----- (+37)
(c)	28v, 70 amp. Prestolite P/N ALU-8403 (Lycoming P/N 78314), including relays and filters. Eligible on Models PA-23-250 and PA-E23-250 when equipped with Item 307.	32 lb.	----- (+37)

Electrical Equipment (Continued)

				PA-E23-250
				PA-23 PA-23-235
				<u>PA-23-160</u> <u>PA-23-250</u>
306. Anti-Collision (Strobe)				
(a) Installation of red anti-collision (strobe) light per STC SA615EA and Piper Drawing 32940. Eligible only on Model PA-23-250, S/N 27-3837, 27-3944 through 27-4916, and 27-7304917 through 27-7554168; and Model PA-E23-250, S/N 27-3944 through 27-4916, and 27-7304917 through 27-7554168.	5.1 lb.	-----	(+237.6)	
(b) Installation of white anti-collision (strobe) light per STC SA800EA and Piper Drawing 32941. Eligible only on Model PA-23-250, S/N 27-3837, 27-3944 through 27-4916, and 27-7304917 through 27-7554168; and Model PA-E23-250, S/N 27-3944 through 27-4916, and 27-7304917 through 27-7554168.	4.2 lb.	-----	(+92.9)	
(c) Installation of red anti-collision (strobe) light per STC SA615EA and Piper Drawing 32940-2 or 32940-3 (28v). Eligible on Models PA-23-250 and PA-E23-250 when Item 307 is installed. Item 401(cl), 401(cm), or 401(db) required. (See NOTE 4).	5.1 lb.	-----	(+237.6)	
(d) Installation of white anti-collision (strobe) light per STC SA800EA and Piper Drawing 32941-2 or 33650 (28v). Eligible on Models PA-23-250 and PA-E23-250 when Item 307 is installed. Item 401 (cl), 401(cm), or 401(db) required.	4.2 lb.	-----	(+92.9)	
307. Installation of 28v electrical system per Piper Drawing 33320. Eligible only on Model PA-23-250, S/N 27-3837, 27-3944 through 27-4916, and 27-7304917 through 27-7405476; and Model PA-E23-250, S/N 27-3944 through 27-4916, and 27-7304917 through 27-7405476. Installation of 28v electrical system per Piper Drawing 33650-2. Eligible only on Model PA-23-250, S/N 27-7554001 through 27-8154030.	Use Actual Wt. & Arm	-----	Eligible	

Interior Equipment

401. (a) DMCRC approved Airplane Flight Manual, Report No. 813, dated January 29, 1954, required for Model PA-23.
- (b) DMCRC approved Airplane Flight Manual, Report No. 832, dated June 29, 1954. Required when Item 602 is installed.
- (c) DMCRC approved Appendix I to Airplane Flight Manual, Report No. 813, dated September 14, 1954. Required when Item 301(b) is installed except with Item 602.
- (d) DMCRC approved Appendix I to Airplane Flight Manual, Report No. 832, dated September 14, 1954. Required when Items 301(b) and 602 are installed.
- (e) DMCRC approved Supplement to Airplane Flight Manual, Report No. 853, dated September 17, 1954. Required when Item 403(a), 403(b), or 403(c) is installed.
- (f) DMCRC approved Appendix II to Airplane Flight Manual, Report No. 813, dated December 27, 1954. Required when Item 107 is installed (without Item 602).
- (g) DMCRC approved Appendix II to Airplane Flight Manual, Report No. 832, dated December 27, 1954. Required when Items 107 and 602 are installed.
- (h) DMCRC approved Appendix III to Airplane Flight Manual, Report No. 813, dated April 1, 1955. Required when Item 604(a) is installed (without Item 602).

Interior Equipment (Continued)

401. (i) DMCB approved Appendix III to Airplane Flight Manual, Report No. 832, dated April 1, 1955. Required when Items 604(a) and 602 are installed.
- (j) DMCB approved Appendix IV to Airplane Flight Manual, Report No. 832, dated May 18, 1955. Required when Item 1, Hartzell Propeller Model HC-82XG or HC-82XL, is installed.
- (k) DMCB approved Appendix VI to Airplane Flight Manual, Report No. 832, dated September 16, 1955. Required when Item 108(a) or 108(b) is installed.
- (l) DMCB approved Supplement to Airplane Flight Manual, Report No. 853, dated September 17, 1954. Required when Item 403(a), 403(b), or 403(c) and Item 108(a) are installed.
- (m) DMCB approved Airplane Flight Manual including Supplement 1 through 8, dated September 1, 1955, for Model PA-23. This manual contains all information contained in Airplane Flight Manuals, Item 401(a) through 401(l), and may be substituted for these manuals.
- (n) DMCB approved Appendix IX to Airplane Flight Manual, Item 401(m), dated December 5, 1955. Required when Item 605, optional seat, is installed.
- (o) DMCB approved Appendix X to Airplane Flight Manual, Item 401(m), dated April 18, 1957. Required when Item 110 is installed.
- (p) DMCB approved Airplane Flight Manual, Report No. 948, dated October 14, 1957, required for Model PA-23-160.
- (q) DMCB approved Airplane Flight Manual, Report No. 985, dated May 2, 1958. Required with Model PA-23 airplanes covered in NOTE 3 or Model PA-23-160 airplanes incorporated in Lycoming Service Letter L126.
- (r) DMCB approved Supplement to Airplane Flight Manual, Report No. 1004, dated August 29, 1958. Required when Item 405 or Item 406(a) is installed. Revision dated June 20, 1962, required when Course Selector Directional Gyro is installed. Course Selector Directional Gyro not eligible with Item 405.
- (s) DMCB approved Supplement No. 11, dated September 30, 1958, to Airplane Flight Manual, Item 401(m). Required when Item 611 is installed.
- (t) DMCB approved Airplane Flight Manual, Report No. 1036, dated September 18, 1959, revised December 11, 1959, required on Model PA-23-250, S/N 27-1 through 27-1999.
- (u) DMCB approved Supplement No. 1 to Airplane Flight Manual, Report No. 1036, dated October 16, 1959.
- (v) DMCB approved Supplement No. 2, dated August 2, 1960, to Airplane Flight Manual, Report No. 1036, dated September 18, 1959. Required when Item 604(b) is installed.
- (w) DMCB approved Supplement No. 3, dated August 2, 1960, to Airplane Flight Manual, Report No. 1036, dated September 18, 1959. Required when Item 501 is installed.
- (x) DMCB approved Supplement No. 4, dated January 20, 1961, to Airplane Flight Manual, Report No. 1036, dated September 18, 1959.
- (y) DMCB approved Supplement No. 9, dated January 20, 1961, to Airplane Flight Manual, Report No. 948, dated October 14, 1957.
- (z) DMCB approved Airplane Flight Manual, Report No. 1204, dated December 15, 1961, required on Model PA-23-250, S/N 27-2000 through 27-2504.

Interior Equipment (Continued)

401. (aa) DMCR approved Supplement No. 1, dated December 15, 1961, to Airplane Flight Manual, Report No. 1204. Required when Item 406(b) is installed. Revision dated June 20, 1962, required when Course Selector Directional Gyro is installed.
- (ab) DMCR approved Supplement No. 2, dated December 15, 1961, to Airplane Flight Manual, Report No. 1204. Required when Item 408(b) is installed.
- (ac) DMCR approved Airplane Flight Manual, Report No. 1207, dated January 22, 1962, required on Model PA-23-235.
- (ad) DMCR approved Supplement No. 1, dated January 22, 1962, to Airplane Flight Manual, Report No. 1207. Required when Item 406(a) is installed. Revision dated June 20, 1962, required when Course Selector Directional Gyro is installed.
- (ae) DMCR approved Supplement No. 2, dated January 22, 1962, to Airplane Flight Manual, Report No. 1207. Required when Item 408(a) is installed.
- (af) DMCR approved Supplement No. 3, dated January 22, 1962, to Airplane Flight Manual, Report No. 1207. Required when Item 604(b) is installed.
- (ag) DMCR approved Supplement No. 4, dated August 13, 1962, to Airplane Flight Manual, Report No. 1207. Required when Item 409(a) is installed.
- (ah) DMCR approved Supplement No. 3, dated August 13, 1962, to Airplane Flight Manual, Report No. 1204. Required when Item 409(b) is installed.
- (ai) DMCR approved Supplement No. 10, dated October 1, 1962, to Airplane Flight Manual, Report No. 948. Required when Item 409(a) is installed.
- (aj) DMCR approved Supplement No. 5, dated October 1, 1962, to Airplane Flight Manual, Report No. 1036. Required when Item 409(a) is installed.
- (ak) DMCR approved Supplement No. 4, dated December 4, 1962, to Airplane Flight Manual, Report No. 1204. Required when Item 410(b) is installed.
- (al) DMCR approved Supplement No. 6, dated December 4, 1962, to Airplane Flight Manual, Report No. 1036. Required when Item 410(a) is installed.
- (am) DMCR approved Supplement No. 5, dated December 4, 1962, to Airplane Flight Manual, Report No. 1207. Required when Item 410(a) is installed.
- (an) DMCR approved Supplement No. 11, dated December 4, 1962, to Airplane Flight Manual, Report No. 948. Required when Item 410(a) is installed.
- (ao) DMCR approved Supplement, dated December 4, 1962, to Airplane Flight Manual, Report Nos. 813, 832, and 985. Required when Item 410(a) is installed.
- (ap) DMCR approved Supplement No. 5, dated February 1, 1963, to Airplane Flight Manual, Report No. 1204. Required when Item 113.C(d) is installed.

Interior Equipment (Continued)

401. (aq) DMCR approved Airplane Flight Manual, Report No. 1308, dated March 23, 1964, revised December 11, 1964, required on Model PA-23-250, S/N 27-2505 through 27-3943, for 4,800 lb. gross weight configuration.
- (ar) DMCR approved Supplement No. 1, dated March 23, 1964, revised August 14, 1964, to Airplane Flight Manual, Item 401(aq). Required when 410(b) is installed.
- (as) DMCR approved Supplement No. 2, dated March 23, 1964, to Airplane Flight Manual, Item 401(aq). Required when Item 409(b) is installed.
- (at) DMCR approved Supplement No. 3, dated March 23, 1964, revised January 12, 1965, to Airplane Flight Manual, Item 104(aq). Required when Item 502 is installed.
- (au) DMCR approved Supplement No. 4, dated August 14, 1964, to Airplane Flight Manual, Item 401(aq). Required when Item 411(a) is installed.
- (av) DMCR approved Supplement No. 6, dated January 7, 1965, to Airplane Flight Manual, Report No. 1207. Required on Model PA-23-235 when Item 411(b) is installed.
- (aw) DMCR approved Supplement No. 6, dated December 10, 1964, to Airplane Flight Manual, Report No. 1204. Required on Model PA-23-250, S/N 27-2000 through 26-2504 when Item 502 is installed.
- (ax) DMCR approved Airplane Flight Manual, Report No. 1360, dated February 25, 1965. Required with Model PA-23-250, S/N 27-2505 through 27-3943, for 5,200 lb. gross weight configuration.
- (ay) DMCR approved Supplement No. 1, dated February 25, 1965, to Airplane Flight Manual, Item 401(ax). Required when Item 410(b) is installed.
- (az) DMCR approved Supplement No. 2, dated February 25, 1965, to Airplane Flight Manual, Item 401(ax). Required when Item 502, 503, or 504 is installed.
- (ba) DMCR approved Supplement No. 3, dated February 25, 1965, to Airplane Flight Manual, Item 401(ax). Required when Item 411(a) is installed.
- (bb) DMCR approved Supplement No. 4, dated March 9, 1965, to Airplane Flight Manual, Item 401(ax). Required when Item 622 is installed.
- (bc) DMCR approved Supplement No. 5, dated March 9, 1965, to Airplane Flight Manual, Item 401(aq). Required when Item 622 is installed.
- (bd) DMCR approved Supplement No. 7, dated March 9, 1965, to Airplane Flight Manual, Report No. 1207, for Model PA-23-235, Item 401(ac). Required when Item 621 is installed.
- (be) DMCR approved Supplement No. 7, dated April 30, 1965, to Airplane Flight Manual, Report No. 1204, for Model PA-23-250, S/N 27-2000 through 27-2504, Item 401(z). Required when Item 604(c) is installed.
- (bf) DMCR approved Supplement No. 6, dated April 30, 1965, to Airplane Flight Manual, Item 401(aq). Required when Item 604(c) is installed.

Interior Equipment (Continued)

401. (bg) DMCB approved Supplement No. 5, dated April 30, 1965, to Airplane Flight Manual, Report No. 1360, for Model PA-23-250, S/N 27-2505 through 27-3943, Item 401(ax). Required when Item 604(c) or 604(d) is installed.
- (bh) DMCB approved Airplane Flight Manual, Report No 1378, dated June 21, 1965, required on Model PA-E23-250, S/N 27-2505 through 27-3943.
- (bi) DMCB approved Supplement No. 1, dated June 21, 1965, to Airplane Flight Manual, Report No. 1378, for Model PA-E23-250, Item 401(bh). Required when Item 410(b) is installed.
- (bj) DMCB approved Supplement No. 2, dated June 21, 1965, to Airplane Flight Manual, Report No. 1378, for Model PA-E23-250, Item 401(bh). Required when Item 502, 503, or 504 is installed.
- (bk) DMCB approved Supplement No. 3, dated June 21, 1965, to Airplane Flight Manual, Report No. 1378, for Model PA-E23-250, Item 401(bh). Required when Item 411(a) is installed.
- (bl) DMCB approved Supplement No. 4, dated June 21, 1965, to Airplane Flight Manual, Report No. 1378, for Model PA-E23-250, Item 401(bh). Required when Item 622 is installed.
- (bm) DMCB approved Supplement No. 4, dated June 21, 1965, to Airplane Flight Manual, Report No. 1378, for Model PA-E23-250, Item 401(bh). Required when Item 604(c) or 604(d) is installed.
- (bn) D.O.A. No. EA-1 approved Supplement No. 8, dated January 20, 1966, to Airplane Flight Manual, Report No. 1207, for Model PA-23-235, Item 401(ac). Required when Item 625 is installed.
- (bo) D.O.A. No. EA-1 approved Supplement No. 7, dated January 20, 1966, to Airplane Flight Manual, Report No. 1308, for Model PA-23-250, Item 401(aq). Required when Item 625 is installed.
- (bp) D.O.A. No. EA-1 approved Supplement No. 6, dated January 20, 1966, to Airplane Flight Manual, Report No. 1360, for Model PA-23-250, Item 401(ax). Required when Item 625 is installed.
- (bq) D.O.A. No. EA-1 approved Supplement No. 6, dated January 20, 1966, to Airplane Flight Manual, Report No. 1378, for Model PA-E23-250, Item 401(bh). Required when Item 625 is installed.
- (br) D.O.A. No. EA-1 approved Supplement No. 7, dated June 17, 1966, to Airplane Flight Manual, Report No. 1360, for Model PA-23-250, Item 401(ax). Required when Item 412 is installed.
- (bs) D.O.A. No. EA-1 approved Supplement No. 8, dated June 17, 1966, to Airplane Flight Manual, Report No. 1360, for Model PA-23-250, Item 401 (ax). Required when Item 413 is installed.
- (bt) D.O.A. No. EA-1 approved Supplement No. 7, dated June 17, 1966, to Airplane Flight Manual, Report No. 1378, for Model PA-E23-250, Item 401(bh). Required when Item 412 is installed.
- (bu) D.O.A. No. EA-1 approved Supplement No. 8, dated June 17, 1966, to Airplane Flight Manual, Report No. 1378, for Model PA-E23-250, Item 401(bh). Required when Item 413 is installed.
- (bv) D.O.A. No. EA-1 approved Airplane Flight Manual, Report No. 1520, dated June 21, 1968. Required for Model PA-23-250, S/N 23-3837, 27-3944 through 27-4573.
- (bw) D.O.A. No. EA-1 approved Supplement No. 1, dated June 21, 1968, to Airplane Flight Manual, Item 401(bv). Required when Item 502(b), 503(b), or 504(b) is installed.

Interior Equipment (Continued)

401. (bx) D.O.A. No. EA-1 approved Supplement No. 2, dated June 21, 1968, to Airplane Flight Manual, Item 401(bv).
Required when Item 604(e) is installed.
- (by) D.O.A. No. EA-1 approved Supplement No. 3, dated June 21, 1968, to Airplane Flight Manual, Item 401(bv).
Required when Item 413(b) is installed.
- (bz) D.O.A. No. EA-1 approved Supplement No. 4, dated June 21, 1968, to Airplane Flight Manual, Item 401(bv).
Required when Item 412(b) is installed.
- (ca) D.O.A. No. EA-1 approved Airplane Flight Manual, Report No. 1521, dated June 21, 1968. Required for
Model PA-E23-250, S/N 27-3944 through 27-4573.
- (cb) D.O.A. No. EA-1 approved Supplement No. 1, dated June 21, 1968, to Airplane Flight Manual, Item 401(ca).
Required when Item 502(b), 503(b), or 504(b) is installed.
- (cc) D.O.A. No. EA-1 approved Supplement No. 2, dated June 21, 1968, to Airplane Flight Manual, Item 401(ca).
Required when Item 604(e) is installed.
- (cd) D.O.A. No. EA-1 approved Supplement No. 3, dated June 21, 1968, to Airplane Flight Manual, Item 401(ca).
Required when Item 413(b) is installed.
- (ce) D.O.A. No. EA-1 approved Supplement No. 4, dated June 21, 1968, to Airplane Flight Manual, Item 401(ca).
Required when Item 412(b) is installed.
- (cf) D.O.A. No. EA-1 approved Supplement No. 5, dated September 13, 1968, to Airplane Flight Manual, Item
401(bv). Required when Item 113C(g) is installed.
- (cg) D.O.A. No. EA-1 approved Supplement No. 5, dated September 13, 1968, to Airplane Flight Manual, Item
401(ca). Required when Item 113C(g) is installed.
- (ch) D.O.A. No. EA-1 approved Supplement No. 6, dated June 13, 1969, to Airplane Flight Manual, Item 401(bv).
Required when Item 414 is installed.
- (ci) D.O.A. No. EA-1 approved Supplement No. 6, dated June 13, 1969, to Airplane Flight Manual, Item 401(ca).
Required when Item 414 is installed.
- (cj) D.O.A. No. EA-1 approved Supplement No. 7, dated September 29, 1969, to Airplane Flight Manual, Item
401(bv). Required when Item 306(a) or 306(b) is installed.
- (ck) D.O.A. No. EA-1 approved Supplement No. 7, dated September 29, 1969, to Airplane Flight Manual, Item
401(ca). Required when Item 306(a) or 306(b) is installed.
- (cl) D.O.A. No. EA-1 approved Airplane Flight Manual, Report No. 1630, dated January 21, 1970, including
Supplements 1 through 6. Required on Model PA-23-250, S/N 27-4426, 27-4574 through 27-4916, and 27-7304917
through 27-7554168.
- (cm) D.O.A. No. EA-1 approved Airplane Flight Manual, Report No. 1631, dated January 21, 1970, including
Supplements 1 through 6. Required on Model PA-E23-250, S/N 27-4574 through 27-4916, and 27-7304917 through
27-7554168.
- (cn) D.O.A. No. EA-1 approved Supplement No. 7, dated April 15, 1970, to Airplane Flight Manual, Item 401(cl).
Required when Item 415 is installed.

Interior Equipment (Continued)

401. (co) D.O.A. No. EA-1 approved Supplement No. 7, dated April 15, 1970, to Airplane Flight Manual, Item 401(cm).
Required when Item 415 is installed.
- (cp) D.O.A. No. EA-1 approved Supplement No. 8, dated February 1, 1971, to Airplane Flight Manual, Item 401(cl).
Required when Item 416 is installed.
- (cq) D.O.A. No. EA-1 approved Supplement No. 8, dated February 1, 1971, to Airplane Flight Manual, Item 401(cm).
Required when Item 416 is installed.
- (cr) D.O.A. No. EA-1 approved Supplement No. 9, dated December 10, 1971, to Airplane Flight Manual, Item 401(cl).
Required when Item 417 is installed.
- (cs) D.O.A. No. EA-1 Supplement No. 9, dated August 15, 1972, to Airplane Flight Manual, Item 401(cm). Required
when Item 417 is installed.
- (ct) D.O.A. No. EA-1 approved Supplement No. 10, dated November 7, 1972, to Airplane Flight Manual, Item 401(cl).
Required when Item 415 is installed.
- (cu) D.O.A. No. EA-1 approved Supplement No. 10, dated November 7, 1972, to Airplane Flight Manual, Item 401(cm).
Required when Item 415 is installed.
- (cv) D.O.A. No. EA-1 approved Supplement No. 11, dated November 7, 1972, to Airplane Flight Manual, Item 401(cl).
Required when Item 416 is installed.
- (cw) D.O.A. No. EA-1 approved Supplement No. 11, dated November 7, 1972, to Airplane Flight Manual, Item 401(cm).
Required when Item 416 is installed.
- (cx) D.O.A. No. EA-1 approved Supplement No. 12, dated October 1, 1974, to Airplane Flight Manual, Item 401(cl).
Required when Item 419 is installed.
- (cy) D.O.A. No. EA-1 approved Supplement No. 12, dated October 1, 1974, to Airplane Flight Manual, Item 401(cm).
Required when Item No. 419 is installed.
- (cz) D.O.A. No. EA-1 approved Supplement No. 13, dated October 1, 1974, to Airplane Flight Manual, Item 410(cl).
Required when Item 418 is installed.
- (da) D.O.A. No. EA-1 approved Supplement No. 13, dated October 1, 1974, to Airplane Flight Manual, Item 401(cm).
Required when Item 418 is installed.
- (db) D.O.A. No. EA-1 approved Airplane Flight Manual, Report No. 1948, dated October 1, 1975, including
Supplements 1 through 6. Required for Model PA-23-250, S/N 27-7654001 through 27-8154030.
- (dc) D.O.A. No. EA-1 approved Supplement No. 7, dated October 15, 1975, to Airplane Flight Manual, Item 401(db).
Required when Item No. 419 is installed.

			PA-23 PA-23-160	PA-E23-250 PA-23-235 PA-23-250
402. Heater				
(a) Modified Stewart-Warner 979-B-1 Not eligible for Models PA-23 or PA-23-160, S/N 23-1068, 23-1152 through 23-2046.	18 lb.	(+33)	-----	
(b) Modified Stewart-Warner 940-B12 per Piper Drawing 18864.	18 lb.	(+33)	-----	
(c) Modified Stewart-Warner 940-D12 per Piper Drawing 18864. Not eligible on Model PA-23-250, S/N 27-2000 through 27-4916, and 27-7304917 through 27-8154030; Model PA-23-235; or Model PA-E23-250.	18 lb.	(+33)	(+33)	
(d) Modified Stewart-Warner 940-D24 per Piper Drawing 18864 (24v system only). Eligible only on Model PA-23-250, S/N 27-1 through 27-1999.	18 lb.	-----	(+33)	
(e) Modified Stewart-Warner 940-DA12 per Piper Drawing 18864 or 30686. Not eligible for use with Item 113C(d), 113C(e), 113C(f), 113C(g), 113C(h) or 113C(i).	18 lb.	(+33)	(+33)	
(f) Modified Stewart-Warner 940-DB12 or 940-K12 per Piper Drawing 30980 or 30686. Eligible for use only with Item 113C(d) or 113C(e), or Item 623 (12v system).	18 lb.	-----	(+33)	
(g) Modified Stewart-Warner 940-DA24 per Piper Drawing 30686 (24v system only). Eligible only on Model PA-23-250, S/N 27-2000 through 27-2504.	18 lb.	-----	(+33)	
(h) Modified Stewart-Warner 940-DB24 per Piper Drawing 30980 (24v system only). Only heater eligible for use with Item 113C(d) (24v system). (Not eligible with any other engine).	18 lb.	-----	(+29)	
(i) Janitrol B3040 per Piper Drawing 32134 (12v system). Eligible on Model PA-23-250, S/N 27-3050, 27-3154 through 27-3836, 27-3838 through 27-3943; and Model PA-E23-250, S/N 27-3154 through 27-3943.	26 lb.	-----	(+29)	
(j) Janitrol B3040 per Piper Drawing 32770 (12v system). Eligible on Models PA-23-250 and PA-E23-250, S/N 27-3837, 27-3944 through 27-4916, and 27-7304917 through 27-7554168.	26 lb.	-----	(+29)	
(k) Janitrol 43D65 or 43D65-1 per Piper Drawing 33320 or 33639-3 (24v system). Eligible on Models PA-23-250 and PA-E23-250 when equipped with Item 307.	26 lb.	-----	(+29)	
403. Lear L-2B automatic pilot with following limits: Servo slip clutch torques (\pm 10% in.-lb.) Elevator, 20; Rudder, 75; and Aileron, 25. Servo Stall forces at pilot controls: Rudder, 30 lb.; Elevator, 10 lb.; and Aileron, 9 lb.				
(a) Lear L-2B Autopilot, Altitude Control and 1350B Approach Coupler installed according to Lear Drawing 701950 or Piper Drawing 18759. Item 301(b), 401(e), and NOTE 2(d) placard required.	104 lb.	(+114)	-----	

Interior Equipment (Continued)

			PA-23 PA-23-160	PA-E23-250 PA-23-235 PA-23-250
403. (b)	Lear L-2B Autopilot with Automatic Altitude Control installed according to Lear Drawing 701950, or Piper Drawing 18759. Items 301(b), 401(e), and NOTE 2(d) placard required.	54 lb.	(+156)	-----
(c)	Lear L-2B Autopilot installed according to Lear Drawing 701950 or Piper Drawing 18759. Items 301(b), 401(e), and NOTE 2(d) placard required.	51 lb.	(+154)	-----
*404.	Mitchell Automatic Co-pilot Model AK046 in accordance with Mitchell Industries Bulletin No. 112 (7-55). (Mitchell Industries, Inc., Box 17, Municipal Airport, Mineral Wells, Texas).	Use Actual	Eligible	-----
405.	AutoControl Autopilot Installation, Mitchell AK067, installed in accordance with Piper Drawing 19548. Item 401(r) and NOTE 2(j) placard required. Eligible on Models PA-23 and PA-23-160, S/N 23-1 through 23-1396, 23-1398 through 23-1501. Course Selector Directional Gyro not eligible with this installation.	4.5 lb.	(+58)	-----
406.	AutoControl Autopilot Installation, Mitchell AK067, installed in accordance with:			
(a)	Piper Drawing 19576. Item 401(r) and NOTE 2(j) placard required for Models PA-23 and PA-23-160, S/N 23-1397, 23-1502 through 23-2046. Item 401(u) and NOTE 2(j) placard required for Model PA-23-250. Model PA-23-250 installation in accordance with this drawing eligible on S/N 27-1 through 27-1999. Course Selector Directional Gyro not eligible on Model PA-23-250, S/N 27-1 through 27-2504. Item 401(ad) and NOTE 2(j) placard required for Model PA-23-235. Not eligible on Model PA-E23-250.	4.5 lb.	(+58)	(+58)
(b)	Piper Drawing 30601. Item 401(aa) and NOTE 2(j) placard required. Eligible only on Model PA-23-250, S/N 27-2000 through 27-2504.	4.5 lb.	-----	(+58)
407.	AutoControl Autopilot Installation, Mitchell AK067, installed in accordance with Piper Drawing 30080. Item 401(u) and NOTE 2(j) placard required (24v system only). Course Selector Directional Gyro not eligible with this installation. Eligible on Model PA-23-250, S/N 27-1 through 27-1999, only.	4.5 lb.	-----	(+58)
408.	Altimatec Autopilot Installation, Mitchell AK081, installed in accordance with:			
(a)	Piper Drawing 30275. Item 401(y) and NOTE 2(q) placards required for Models PA-23 and PA-23-160, S/N 23-1502 through 23-2046. Item 401(x) and NOTE 2(q) placards required for Model PA-23-250. Model PA-23-250 installation in accordance with this drawing eligible on S/N 27-1 through 27-1999, only.	11 lb.	(+57)	(+57)
(b)	Piper Drawing 30600. Item 401(ab) and NOTE 2(q) placards required. Eligible on Model PA-23-250, S/N 27-2000 through 27-2504, only.	11 lb.	-----	(+57)
409.	Altimatec Autopilot Installation, Mitchell AK090, installed in accordance with:			
(a)	Piper Drawing 30992. Item 401(ai) required for Models PA-23 and PA-23-160, S/N 23-1502 through 23-2046. Item 401(ag) required for Model PA-23-235. Item 401(aj) required for Model PA-23-250, S/N 27-1 through 27-1999. NOTE 2(q) placards required on all of the above models. Only eligible on above listed models.	10 lb.	(+59)	(+59)

Interior Equipment (Continued)

		PA-23 PA-23-160	PA-E23-250 PA-23-235 PA-23-250
409. (b)	Piper Drawing 31000. Item 401(ah) and NOTE 2(q) placards required for Model PA-23-250, S/N 27-2000 through 27-2504. Item 401(as) and NOTE 2(q) placards required for Model PA-23-250, S/N 27-2505 through 27-3943. Only eligible on above listed S/N.	10 lb. -----	(+59)
410.	AutoControl II Autopilot Installation, Mitchell AK079-E, installed in accordance with:		
(a)	Piper Drawing 30989. Item 401(ao) required for Model PA-23. Item 401(an) required for Model PA-23-160. Item 401(am) required for Model PA-23-235. Item 401(al) required for Model PA-23-250, S/N 27-1 through 27-1999. NOTE 2(s) placards required on all of the above models. Not eligible on Model PA-E23-250 or Model PA-23-250, S/N 27-2000 through 27-4916, and 27-7304917 through 27-8154030.	4.5 lb. (+57.5)	(+57.5)
(b)	Piper Drawing 30990. Item 401(ak) and NOTE 2(s) placards required for Model PA-23-250, S/N 27-2000 through 27-2504. Item 401(ar) or 401(ay) and NOTE 2(s) placards required for Model PA-23-250, S/N 27-2505 through 27-3943. Item 401(bi) and NOTE 2(s) placards required for Model PA-E23-250.	4.5 lb. -----	(+57.5)
411.	Altimatec II Autopilot Installation with Automatic Trim and Radio Coupling, Mitchell AK090 or AK151, installed in accordance with:		
(a)	Piper Drawing 31670. Item 401(au) or 401(ba) or 401(bk) and NOTE 2(x) placards required. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-2505 through 27-3943, only.	14.5 lb. -----	(+91.3)
(b)	Piper Drawing 31968. Item 401(av) and NOTE 2(x) placard required. Eligible only on Model PA-23-235.	14.5 lb. -----	(+91.3)
412.	Altimatec III Autopilot Installation with Automatic Trim and AutoFlite, installed in accordance with:		
(a)	Piper Drawing 32261. Item 401(br) or 401(bt) and NOTE 2(ab) placards required. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-2505 through 27-3943, only.	18.9 lb. -----	(+89.2)
(b)	Piper Drawing 32719. Item 401(bz) or 401(ce) and NOTE 2(ab) placards required. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-3837, 27-3944 through 27-4916, and 27-7304917 through 27-7554168, only.	18.9 lb. -----	(+89.2)
413.	AutoControl III Autopilot Installation, installed in accordance with:		
(a)	Piper Drawing 32249. Item 401(bs) or 401(bu) required. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-2505 through 27-3943, only.	3.5 lb. -----	(+77.5)
(b)	Piper Drawing 32749. Item 401(by) or 401(cd) required. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-3837, 27-3944 through 27-4916, and 27-7304917 through 27-7554168, only.	3.5 lb. -----	(+77.5)

Interior Equipment (Continued)

		PA-23 PA-23-160	PA-E23-250 PA-23-235 PA-23-250
414. Altimatic IIIB Autopilot Installation with Automatic Trim and AutoFlite, installed in accordance with Piper Drawing 32862. Item 401(ch), 401(ci), 401(cx), or 401(cy) and NOTE 2(ae) placards required. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-3837, 27-3944 through 27-4916, and 27-7304917 through 27-7554168.	18.9 lb.	-----	(+89.2)
415. Piper Altimatic V/FD or Altimatic V/FD-1 installed in accordance with Bendix STC No. SA429SO and Piper Drawing No. 33100. Item 401(cn) 401(co), 401(ct), 401(cu), or 410(db) required. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-4426, 27-4574 through 27-4916, and 27-7304917 through 27-8154030, only.	42.2 lb.	-----	(+84.6)
416. Piper Altimatic V or Altimatic V-1 Autopilot installed in accordance with Bendix STC No. SA429SO and Piper Drawing No. 33106. Item 401(cp), 401(cq), 401(cv), 401(cw), or 401(db) required. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-4426, 27-4574 27-4916, and 27-7304917 through 27-8154030, only.	37.3 lb.	-----	(+91.4)
417. Altimatic IIIB-1 Autopilot Installation with Automatic Trim and AutoFlite installed per Piper Drawing No. 33233-2 (14v) or 33233-4 (28v). Item 401(cr) or 401(cs) required. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-4574 through 27-4916, and 27-7304917 through 27-7554168, only.	15 lb.	-----	(+84.5)
418. Altimatic IIIC Autopilot installed in accordance with Piper Drawing No. 15600 (28v). Item 401(cz), 401(da), or 401(db) required. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-4426, 27-4574 through 27-4916, and 27-7304917 through 27-8154030, only. NOTE 2(ac) placard required.	25 lb.	-----	(+110)
419. AutoControl IIIB Autopilot Installation installed in accordance with Piper Drawing No. 15710-2. Item 401(cx), 401(cy) or 401(dc) required. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-4426, 27-4574 through 27-4916, and 27-7304917 through 27-8154030, only.	13.5 lb.	-----	(+77.3)

Deicing Equipment (Propeller, Wing, and Windshield)

501. Propeller deicer (B. F. Goodrich) installed in accordance with Piper Drawing No. 30066. Item 401(w) and NOTE 2(p) placard required (24v system only). Eligible on Model PA-23-250, S/N 27-1 through 27-1999, only.	8 lb.	-----	(+29)
502. Heated Windshield Panel Installation in accordance with:			
(a) Piper Drawing No. 31687. Item 401(at), 401(aw), 401(az), or 401(bj) required. NOTE 2(w) placard required only as specified in Item 401(at), 401(aw), 401(az), or 401(bj).	2.5 lb.	-----	(+59)
(b) Piper Drawing No. 31640. Item 401(bw), 401(cb), 401(cl), or 401(cm) required. NOTE 2(w) placard required only as specified in Item 401(bw), 401(cb), 401(cl), or 401(cm).	2.5 lb.	-----	(+59)
(c) Piper Drawing No. 31640-3 (28v system only). Item 401(bw), 401(cb), 401(cl), 401(cm), or 401(db) required. NOTE 2(w) placard required as specified in Item 401(bw), 401(cb), 401(cl), 401(cm), or 401(db).	2.5 lb.	-----	(+59)

Deicing Equipment (Propeller, Wing, and Windshield) (Continued)

Deicing Equipment (Propeller, Wing, and Windshield) (Continued)			PA-23 PA-23-160	PA-E23-250 PA-23-235 PA-23-250
503. Pneumatic deicing equipment (B. F. Goodrich) installed in accordance with:				
(a) Piper Drawing No. 32000 or B. F. Goodrich STC No. SA155EA. Item 401(az), 401(bj) and Flight Manual Supplement, or B. F. Goodrich Report No. 63-145 required. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-2505 through 27-3836, and 27-3838 through 27-3943, only.	45.11 lb.	-----	(+125.2)	
(b) Piper Drawing No. 32735 or B. F. Goodrich STC No. SA155EA. Item 401(bw), 401(cb), 401(cl), or 401(cm) and Flight Manual Supplement, B. F. Goodrich Report No. 63-145 required. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-3837, 27-3944 through 27-4916, and 27-7304917 through 27-7554168, only.	45.41 lb.	-----	(+125.2)	
(c) Piper Drawing No. 32302 or B. F. Goodrich STC No. SA155EA. Item 401(bw), 401(cb), 401(cl), or 401(cm), and Flight Manual Supplement, B. F. Goodrich Report No. 63-145 required. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-3837, 27-3944 through 27-4916, and 27-7304917 through 27-7554168, only.	42.54 lb.	-----	(+128.3)	
(d) Piper Drawing No. 33435-3 and B. F. Goodrich STC No. SA155EA. Item 401(cl) or 401(cm) required. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-4574 through 27-4916, and 27-7304917 through 27-7554168, only.	22.4 lb. (less pumps)	-----	(+140)	
(e) Piper Drawing No. 15695-2 or Airborne Mfg. Co. STC No. SA667CE, revised March 14, 1975. Item 401(cl) or 401(cm) required. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-4426, 27-4574 through 27-4916, and 27-7304917 through 27-7554168, only.	36 lb.	-----	(+125.84)	
(f) Piper Drawing No. 15585-2 and B. F. Goodrich STC No. SA155EA. Item 401(db) required. Eligible on Model PA-23-250, S/N 27-7654001 through 27-8154030, only.	19 lb. (less pumps)	-----	(+154.2)	
504. Electric propeller deicing equipment (B. F. Goodrich) installed in accordance with:				
(a) Piper Drawing No. 32001 or B. F. Goodrich STC No. SA195EA. Item 401(az) or 401(bj), and Flight Manual Supplement, B. F. Goodrich Report No. 64-722, dated June 24, 1964, required. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-2505 through 27-3836, 27-3838 through 27-3943, only.	12.98 lb.	-----	(+42.66)	
(b) Piper Drawing No. 32740 or B. F. Goodrich STC No. SA195EA. Item 401(bw), 401(cb), 401(cl), or 401(cm), and Flight Manual Supplement, B. F. Goodrich Report No. 64-722, dated June 24, 1964, required. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-3837, 27-3944 through 27-4916, and 27-7304917 through 27-7554168, only.	12.98 lb.	-----	(+42.66)	
(c) Piper Drawing No. 32740-2 or B. F. Goodrich STC No. SA195EA. Item 401(cl), 401(cm), or 401(db), and Flight Manual Supplement, B. F. Goodrich Report No. 64-722, dated June 24, 1964 required. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-4426, 27-4574 through 27-4916, and 27-7304917 through 27-8154030, only.	12.9 lb.	-----	(+42.7)	

Deicing Equipment (Propeller, Wing, and Windshield) (Continued)

		PA-23 PA-23-160	PA-E23-250 PA-23-235 PA-23-250 (+24.4)
505. Propeller ice shields installed in accordance with Piper Drawing No. 33498. Eligible on Model PA-23-250, S/N 27-4426, 27-4574 through 27-4916, and 27-7304917 through 27-8154030, only.	2.8 lb.	-----	

Miscellaneous Equipment (Not Listed Above)

601. Heated pitot head			
(a) Kollsman 373D-01, 12v per Piper Drawing 19024.	1 lb.	(+129)	-----
(b) Aero Instrument No. PST-305, 12v per Piper Drawing 19024.	1 lb.	(+129)	-----
(c) Aero Instrument No. PST-305, 12v per Piper Drawing 19024-2.	1 lb.	-----	(+129)
(d) Aero Instrument No. PST-305, 24v per Piper Drawing 19024-3 (24v system only). Eligible on Model PA-23-250 only.	1 lb.	-----	(+129)
602. Emergency gear extended (CO ₂ bottle). Item 401(b) required with this installation (Model PA-23 only). NOTE 2(c) placard required with this installation (all models). Not eligible on Model PA-23-250, S/N 27-8054001 through 27-8154030.	2 lb.	(+89)	(+89)
603. Emergency exit installed in accordance with:			
(a) Piper Drawing SK-556.	Negligible Wt. Change	Eligible	-----
(b) Piper Drawing 30599, 31520, or 33764-2. NOTE 2(r) placard required. Eligible only on Model PA-23-250, S/N 27-2000 through 27-4916, and 27-7304917 through 27-8154030, and Model PA-E23-250, only.	Negligible Wt. Change	-----	As Noted
604. Oxygen equipment			
(a) Scott Oxygen Console Model 8800 installed in accordance with Piper Drawing 18683. Item 401(i) and NOTE 2(f) placard required. (Eligible for installation only on Model PA-23 with canvas sling type rear seat).	32 lb.	(+122)	-----
(b) Scott Oxygen Console Model 8800 installed in accordance with Piper Drawing 30050. Item 401(v) and NOTE 2(f) placard required for Model PA-23-250. On Model PA-23-250, eligible only on S/N 27-1 through 27-1999. Item 401(af) and NOTE 2(f) placard required for Model PA-23-235. (Fifth seat at (+150) must be removed). Not eligible on Model PA-E23-250.	35 lb.	-----	(+149)
(c) Oxygen System installed in accordance with Piper Drawing 31980. Item 401(bc), 401(bf), or 401(bg), or 401(bm) and NOTE 2(z) placards required. Eligible only on Model PA-23-250, S/N 27-2000 through 27-3049, and 27-3051 through 27-3153; and Model PA-E23-250, S/N 27-2505 through 27-3049, and 27-3051 through 27-3153.	48 lb.	-----	(+179)
(d) Oxygen System installed in accordance with Piper Drawing 32140. Item 401(bg) or 401(bm) and NOTE 2(z) placards required. Eligible only on Model PA-23-250, S/N 27-3050, 27-3154 through 27-3836, and 27-3838 through 27-3943; and Model PA-E23-250, S/N 27-3154 through 27-3943.	48 lb.	-----	(+161)

Miscellaneous Equipment (Continued)

		PA-23 PA-23-160	PA-E23-250 PA-23-235 PA-23-250 (+161)
604. (e) Oxygen System installation in accordance with Piper Drawing 32388 or 33835-2. Item 401(bx), 401(cc), 401(cl), 401(cm), 401(db) and NOTE 2(z) placard required. Eligible only on Model PA-23-250 S/N 27-3837, 27-3944 through 27-4916, and 27-7304917 through 27-8154030; and Model PA-E23-250, S/N 27-3944 through 27-4916, and 27-7304917 through 27-8154030, only.	48 lb.	-----	
605. Optional seat installed in accordance with Piper Drawings 18868 and 18920. NOTE 2(g) and 2(h) placards and Item 401(n) required.	27 lb.	(+143)	-----
606. Reclining seat installation, Piper P/N 18937 installed in accordance with Piper Drawings 18868 and 18920.	14 lb.	(+128)	-----
607. Taxi light			
(a) Installed in accordance with Piper Drawing 19170 or 30499.	2 lb.	(+25)	(+25)
(b) Installed in accordance with Piper Drawing 19170 or 31163 (24v only). Eligible on Model PA-23-250, only.	2 lb.	-----	(+25)
(c) Installed in accordance with Piper Drawing 30503 (14v), 33320 or 33650-2 (28v). Eligible on Models PA-23-250 and PA-E23-250, only.	2 lb.	-----	(+25)
608. Dual cylinder head temperature gauge			
(a) Installed in accordance with Piper Drawing 19194.	3 lb.	(+80)	-----
(b) Installed in accordance with Piper Drawing 30950.	3 lb.	-----	(+80)
(c) Installed in accordance with Piper Drawing 30120, 31480, or 32664. Required and eligible only when Item 113C(d), 113C(e), or 113C(f) is installed.	Negligible Wt. Change	-----	As Noted
(d) Gauge Assembly installed per Piper Drawing 33322 or 33649-2 (28v only). Required on Models PA-23-250 and PA-E23-250 when Item 307 is installed.	Negligible Wt. Change	-----	As Noted
609. Fifth seat (Piper Drawing 19399) installed in accordance with Piper Drawing 19400. NOTE 2(h) placard required.	18 lb. (+150)	-----	
610. Reclining seat installation, Piper P/N 19463, installed in accordance with Piper Drawing 19400.	14 lb. (+128)	-----	
611. Nacelle fairings, Piper P/N 19361 (left) and 19361-1 (right), installed in accordance with Piper Drawing 17913, Revision BP. Item 401(s) required for Model PA-23, S/N 23-1 through 23-1163.	Negligible Wt. Change	Eligible	-----
612. Stall Warning Indicator			
(a) Safe Flight Model C-52207	Negligible Wt. Change	-----	Required
(b) Safe Flight Model C-52207-4 installed per Piper Drawing 32425 (14v) or 32425-2 (28v).	Negligible Wt. Change	-----	Required

Miscellaneous Equipment (Continued)

		PA-23 PA-23-160	PA-E23-250 PA-23-235 PA-23-250
613. Fifth Seat (Piper Drawing 19724) installed in accordance with Piper Drawing 19739. NOTE 2(h) placard required.	18 lb.	(+150)	-----
614. Dual Fuel Flow Gage installed in accordance with:			
(a) Piper Drawing 31084. Required and eligible only when Item 113C(d), 113C(e), or 113C(f) is installed on Model PA-23-250, S/N 27-2000 through 27-3836, and 27-3838 through 27-3943.	1.5 lb.	-----	(+80)
(b) Piper Drawing 32734. Required and eligible only when Item 113C(e), 113C(f), or 113C(h) is installed on Model PA-23-250, S/N 27-3837, 27-3944 through 27-4916, and 27-7304917 through 27-8154030; and Model PA-E23-250, S/N 27-3944 through 27-4916, and 27-7304917 through 27-8154030.	1.5 lb.	-----	(+80)
(c) Piper Drawing No. 32858-2. Required and eligible only when Item 113C(g) or 113C(i) is installed.	1.5 lb.	-----	(+80)
615. Piper Electric Trim installed in accordance with:			
(a) Piper Drawing 31660. NOTE 2(y) placard required. Eligible only on Model PA-23-250, S/N 27-2505 through 27-3826, 27-3838 through 27-3943; Model PA-23-235; and Model PA-E23-250, S/N 27-2505 through 27-3943. Not eligible when Item 411(a), 411(b), or 412(a) is installed.	.4 lb.	-----	(+176)
(b) Piper Drawing 32765 (14v); 32765-2 (28v), or 32765-3 (28v). NOTE 2(y) placard required. Eligible only on Model PA-23-250, S/N 27-3837, 27-3944 through 27-4916, and 27-7304917 through 27-8154030; and Model PA-E23-250, S/N 27-3944 through 27-4916, and 27-7304917 through 27-8154030. Not eligible when Item 412(b), 414, 415, 416, or 417 is installed.	.4 lb.	-----	(+176)
616. Piper Radio Coupler installed in accordance with:			
(a) Piper Drawing 30990, 31670, or 25678. Eligible only on Model PA-23-250, S/N 27-2505 through 27-3836, 27-3838 through 27-3943; and Model PA-E23-250, S/N 27-2505 through 27-3943.	.51 lb.	-----	(+59)
(b) Piper Drawing 32751. Eligible only on Model PA-23-250, S/N 27-3837, 27-3944 through 27-4916, and 27-7304917 through 27-8154030; and Model PA-E23-250, S/N 27-3944 through 27-4916, and 27-7304917 through 27-7554168.	.51 lb.	-----	(+59)
617. Airspeed Indicator per:			
(a) Piper Drawing 17419-15, 17419-19, 30353-8, and 30353-14. Required and eligible on Model PA-23-250, S/N 27-2505 through 27-4916, and 27-7304917 through 27-7554168 for 5,200 lb. take-off gross weight and configuration, and Model PA-E23-250.	Negligible Wt. Change	-----	Eligible
(b) Piper Drawing 17419-31 and 30353-24. Required and eligible on Model PA-23-250, S/N 27-7654001 through 27-8154030.	Negligible Wt. Change	-----	Eligible

Miscellaneous Equipment (Continued)

		PA-23 PA-23-160	PA-E23-250 PA-23-235 PA-23-250 Eligible
618. Revised Cowl Flaps installed per Piper Drawing 31991. Eligible and required only on Model sPA-23-250 and PA-E23-250, S/N 27-2505 through 27-4916, and 27-7304917 through 27-8154030 for 5,200 lb. take-off gross weight. Not eligible when Item 113C(f) or 113C(g) is installed.	Negligible Wt. Change	-----	Eligible
619. Alternate Static System installed per Piper Drawing 31990. Eligible on Model Model PA-23-235 only. NOTE 2(aa) placards required.	Negligible Wt. Change	-----	Eligible
620. Alternate Static System installation per Piper Drawing 31989, 32655 or 32655-2. Eligible on Models PA-23-235, PA-23-250, and PA-E23-250, S/N 27-2000 through 27-4916, and 27-7304917 through 27-8154030. NOTE 2(aa) placards required.	Negligible Wt. Change	-----	Eligible
621. Mixture Monitor installed per Piper Drawing 31994. Eligible only on Model PA-23-235. Item 401(bd) required.	2 lb.	-----	(+80)
622. (a) Mixture Monitor installed per Piper Drawing 31995 or 32360. Eligible only on Model PA-23-250, S/N 27-2505 through 27-3836, 27-3838 through 27-3943; and Model PA-E23-250, S/N 27-2505 through 27-3943. Item 401(bb), 401(bc), or 401(bl) required.	2 lb.	-----	(+80)
(b) Exhaust Gas Temperature indicator installed in accordance with Piper Drawing 32744 or 33596-3. Eligible only on Model PA-23-250, S/N 27-3837, 27-3944 through 27-4916, and 27-7304917 through 27-8154030; and Model PA-E23-250, S/N 27-3944 through 27-4916, and 27-7304917 through 27-8154030. Not eligible when Item 113C(g) or 113C(i) is installed.	2 lb.	-----	(+80)
(c) Exhaust Gas Temperature Indicator installed in accordance with Piper Drawing 32649 or 33596-2. Eligible and required only when Item 113C(g) or 113C(i) is installed.	2 lb.	-----	(+80)
623. AiResearch Turbocharger System Installation installed in accordance with Piper Drawing 32016, or AiResearch Instructions, and AiResearch Aviation Service Co. STC No. SA909WE, dated June 16, 1965, or revision dated September 24, 1965. Item 113C(f); AiResearch Aviation Service Company FAA-approved Airplane Flight Manual Supplement for Piper Model PA-23-250, dated June 18, 1965; or AiResearch Aviation Service Company FAA-approved Airplane Flight Manual Supplement for Piper Models PA-23-250 and PA-E23-250, dated September 24, 1965, or revision dated June 29, 1966; and NOTE 2(t), 2(u), and 2(v) placards required. Item 402(f) or 402(i) heaters eligible with this installation. Eligible only on Models PA-23-250 and PA-E23-250, S/N 27-2505 through 27-4916, and 27-7304917 through 27-7554168.	Use Actual Wt. & Arm	-----	Eligible
624. External Power Receptacle installation in accordance with:			
(a) Piper Drawing 31622. Eligible only on Model PA-23-250, S/N 27-2505 through 27-3836, and 27-3838 through 27-3943; and Model PA-E23-250, S/N 27-2505 through 27-3943.	7 lb.	-----	(+10)
(b) Piper Drawing 32743. Eligible only on Models PA-23-250 and PA-E23-250, S/N 27-3837, 27-3944 through 27-4425, and 27-4427 through 27-4573.	7 lb.	-----	(+10)

Miscellaneous Equipment (Continued)

			PA-23 PA-23-160	PA-E23-250 PA-23-235 PA-23-250
624. (c)	Piper Drawing 33021. Eligible only on Models PA-23-250 and PA-E23-250, S/N 27-4426, 27-4574 through 27-4916, and 27-7304917 through 27-7554168.	7 lb.	-----	(+11)
(d)	Piper Drawing 33328-2 (28v only). Eligible on Models PA-23-250 and PA-E23-250 when Item 307 is installed.	7 lb.	-----	(+11)
625.	Optional Flap Position Indicator installed per Piper Drawing 30247 or 31548. Eligible only on Models PA-23-235; PA-23-250 and PA-E23-250, S/N 27-2505 through 27-3836, and 27-3838 through 27-3943. Item 401(bn), 401(bo), 401(bp), or 401(bq) required.	Negligible Wt. Change	-----	Eligible
626.	Dual Tachometer installed in accordance with Piper Drawing 25700-3. Eligible only on Models PA-23-250 and PA-E23-250, S/N 27-3385 through 27-4916, and 27-7304917 through 27-8154030.	.7 lb.	-----	(+68.5)
627.	Propeller Synchronizer, installed in accordance with Piper Drawing 33006. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-3837, 27-3944 through 27-4916, and 27-7304917 through 27-7554168.	7.75 lb.	-----	(+78)
628.	Propeller Synchrophaser installed per Piper Drawing 33249 or 33249-2. Eligible only on Models PA-23-250 and PA-E23-250, S/N 27-3837, 27-3944 through 27-4916, and 27-7304917 through 27-81540430.	7.45 lb.	-----	(+61.9)
629.	Ballast weight installed per Piper Drawing No. 32330. Eligible on Models PA-23-250 and PA-E23-250, S/N 27-4426, 27-4574 through 27-4780. See NOTE 5.	Use Actual Weight	-----	(+300)
630.	Wing Inspection Light (for ice detection) installed per Piper Drawing 28543-2. Eligible Models PA-23-250 and PA-E23-250, S/N 27-8054001 through 27-8154030.	.3 lb.	-----	(+97.8)
NOTE 1	Current weight and balance report including list of equipment included in certified empty weight and loading instructions when necessary must be provided for each aircraft at the time of original certification. The certificated empty weight and corresponding C. G. location for Models PA-23-250, PA-E23-250 and PA-23-235, must include unusable fuel, 22 lb. at (+113). For Model PA-23-250, S/N 27-7554001 through 27-8154030, the unusable fuel is 40.8 lb.(6.8 gallons) at (+113).			
NOTE 2	The following placards must be displayed:			
	(a) On the instrument panel in full view of the pilot: "THIS AIRPLANE MUST BE OPERATED AS A NORMAL CATEGORY AIRPLANE IN COMPLIANCE WITH THE AIRPLANE FLIGHT MANUAL. ACROBATIC MANEUVERS (INCLUDING SPINS) PROHIBITED."			
	(b) On the baggage compartment door frame of Models PA-23 and PA-23-160 only: "BAGGAGE MAXIMUM 200 POUNDS. REAR SEATS MAY BE REMOVED AND 340 POUNDS MAXIMUM BAGGAGE DISTRIBUTED ON FLOOR BETWEEN FRONT SPAR AND BAGGAGE COMPARTMENT."			
	(c) On firing ring cover of emergency landing gear extender under left front seat when Item 602 is installed: "EMERGENCY GEAR EXTENDER. PLACE GEAR SELECTOR TO DOWN POSITION. LIFT COVER, PULL RING."			
	(d) In full view of the pilot when Item 403 is installed (placard not required when Item 108(a) is installed): "DO NOT OPERATE AUTOMATIC PILOT ON SINGLE ENGINE OPERATION."			

NOTE 2
(Continued)

- (e) On fuel control panel between front seats when Item 107(a) is installed:
"USE AUXILIARY TANK LEVEL FLIGHT ONLY."
- (f) On Scott Oxygen Console when Item 604(a) or 604(b) is installed:
"CAUTION: DO NOT SMOKE WHILE USING OXYGEN."
- (g) Under both rear windows when Item 605 is installed:
"LATCH SEATS FOR TAKEOFF AND LANDING."
- (h) On baggage door frame when Item 605, 609, or 613 is installed:
"WHEN FIVE SEATS ARE INSTALLED SEE WEIGHT AND BALANCE FOR BAGGAGE CAPACITY AND LOADING SCHEDULE."
- (i) Omitted.
- (j) Unless otherwise specified, on instrument panel when Item 405, 406(a), or 406(b) is installed and on the window ledge to left of pilot when Item 407 is installed.

When the AutoControl autopilot is equipped with the Zero Heading Directional Gyro:

- 1. On the face of the Directional Gyro:
"MODIFIED FOR PIPER AUTOCONTROL"
- 2. "PIPER AUTOCONTROL
TO ENGAGE: PUSH TURN CONTROL AT D. G. IN AND CENTER KNOBS.
THEN PUSH IN ENGAGING CONTROL, ROCKING WHEEL IF
NECESSARY.
TO TURN: MOVE TURN CONTROL IN DESIRED DIRECTION
FOR HEADING
LOCK: SET D.G. AT 0°
PULL OUT TURN CONTROL KNOB
USE TRIM KNOB TO MAINTAIN EXACT 0° HEADING."
- 3. On or adjacent to the autopilot engagement control knob:
"PUSH TO ENGAGE. DISENGAGE DURING TAKEOFF AND LANDING."
- 4. On or adjacent to the turn control:
"TURN CONTROL. PULL FOR DIRECTION CONTROL ON 0° HEADING ONLY."

When the AutoControl autopilot is equipped with the Course Selector Directional Gyro:

- 1. On the face of the Direction Gyro:
"PIPER COURSE SELECTOR"
- 2. "PIPER AUTOCONTROL
TO ENGAGE: PUSH TURN CONTROL AT D.G. IN AND CENTER KNOBS.
THEN PUSH IN ENGAGING CONTROL, ROCKING WHEEL IF
NECESSARY.
TO TURN: MOVE TURN CONTROL IN DESIRED DIRECTION.
FOR HEADING
LOCK: SET COURSE SELECTOR AND D.G. AT MAGNETIC HEADING.
PULL TURN CONTROL KNOB.
USE TRIM KNOB TO MAINTAIN HEADING."
- 3. On or adjacent to the autopilot engagement control knob:
"PUSH TO ENGAGE. DISENGAGE DURING TAKEOFF AND LANDING."
- 4. On or adjacent to the turn control:
"TURN CONTROL. PULL FOR HEADING LOCK."
- 5. On or adjacent to the D.G. caging knob:
"PULL TO SELECT HEADING."

- (k) On the instrument panel adjacent to vacuum selector valve on Model PA-23-250, S/N 27-1 through 27-2504 and Model PA-23-235, and on Models PA-23 and PA-23-160 when Item 108(a) or 108(b) is installed:
"VACUUM CHECK."

NOTE 2
(Continued)

- (l) On the baggage compartment door frame on Model PA-23-250, S/N 27-1 through 27-1999, and Model PA-23-235:
"BAGGAGE MAX. 200 LBS. SEE WEIGHT AND BALANCE FOR BAGGAGE CAPACITY AND LOADING SCHEDULE."

On the front and rear baggage compartment door frame on Model PA-23-250, S/N 27-2000 through 27-4916, and 27-7304917 through 27-8154030 and Model PA-E23-250:

"BAGGAGE CAPACITY 150 LB. MAX. SEE LOADING SCHEDULE."

- (m) Under both center windows on Models PA-23-250, PA-E23-250, and PA-23-235:
"LATCH SEATS FOR TAKEOFF AND LANDING."

- (n) On the instrument panel for Models PA-23-250, PA-E23-250, and PA-23-235. Not eligible for S/N 27-7654001 through 27-8154030:

"MINIMUM SINGLE ENGINE CONTROL SPEED 80 MPH."

On the instrument panel for Model PA-23-250, S/N 27-7654001 through 27-8154030:

"MINIMUM SINGLE ENGINE CONTROL SPEED 64 KIAS."

"MAXIMUM SPEED FOR LANDING GEAR OPERATION 132 KIAS."

"DESIGN MANEUVERING SPEED 131 KIAS."

- (o) Inside rudder on tip rib on Models PA-23-250, PA-E23-250, and PA-23-235 when Item 304(b), 304(c), 304(e), 304(f), or 304(g) is installed:

"ROTATING BEACON REQUIRED FOR PROPER RUDDER MASS BALANCE. DO NOT REMOVE."

Inside rudder on tip rib on Models PA-23-250 and PA-E23-250 when Item 306(a) or 306(c) is installed:

"ANTI-COLLISION LIGHT REQUIRED FOR PROPER RUDDER MASS BALANCE. DO NOT REMOVE. SEE SERVICE MANUAL."

- (p) On instrument panel to left of pilot's control wheel when Item 501, 504(a), 504(b), or 504(c) is installed:

"PROP DEICER

ON

OFF"

On face of deicer ammeter on top right instrument when Item 501, 504(a), 504(b), or 504(c) is installed:

"PROP DEICER"

- (q) Unless otherwise specified, on the instrument panel in front of pilot when Item 408(a), 408(b), 409(a), or 409(b) is installed:

1. To the right of the control console:

"PIPER ALTIMATIC PILOT INSTRUCTIONS

LIMITATIONS:

1. PILOT OFF DURING TAKEOFF AND LANDING.

2. PILOT OFF DURING SINGLE ENGINE OPERATION.

NORMAL OPERATION:

1. REFER TO FLIGHT MANUAL.

EMERGENCY:

1. DISENGAGE ALTIMATIC CONTROLS.

2. ALTIMATIC PILOT MAY BE OVERPOWERED MANUALLY."

2. Below the Directional Gyro:

"PULL TO SELECT HEADING"

3. Adjacent to the Pitch Control Knob:

"UP

DN"

4. Adjacent to the Pitch Control Knob:

"PULL

ALT

HOLD"

NOTE 2
(Continued)

- (r) Under the left center window when Item 603(b) is installed and required on Model PA-23-250, S/N 27-2000 through 27-4916, and 27-7304917 through 27-8154030 and on Model PA-E23-250:
 "EMERGENCY EXIT RELEASE
 REMOVE COVER
 TURN HANDLE
 PUSH DOOR"

- (s) Unless otherwise specified, on instrument panel in front of pilot when Item 410(a) or 410(b) is installed.

When the AutoControl autopilot is equipped with the zero heading Directional Gyro:

1. On the face of the Directional Gyro:
 "MODIFIED FOR PIPER AUTOCONTROL"
2. On the Console faceplate:
 "PIPER AUTOCONTROL II
 TO ENGAGE: PUSH HEADING LOCK BUTTON TO OUT POSITION.
 CENTER TURN -TRIM KNOB.
 ENGAGE ROLL.
 TO TURN: MOVE TURN-TRIM KNOB IN DESIRED DIRECTION
 FOR HEADING:
 LOCK: SET D.G. AT 0°. UNCAVE.
 PUSH HEADING LOCK BUTTON TO IN POSITION.
 USE TURN-TRIM KNOB TO MAINTAIN EXACT 0° HEADING."
 "DISENGAGE DURING TAKEOFF AND LANDING."
3. On or adjacent to the respective controls:
 "TURN TRIM
 HEADING LOCK
 ROLL
 PUSH TO ENGAGE"

When the AutoControl autopilot is equipped with the Course Selector Directional Gyro:

- ** 1. On the face of the Directional Gyro:
 "PIPER COURSE SELECTOR."
2. On the Console faceplate:
 "PIPER AUTOCONTROL II
 TO ENGAGE: PUSH HEADING LOCK BUTTON TO OUT POSITION.
 CENTER TURN-TRIM KNOB.
 ENGAGE ROLL.
 TO TURN: MOVE TURN-TRIM KNOB IN DESIRED DIRECTION.
 FOR HEADING
 LOCK: SET D.G. WITH MAGNETIC COMPASS.
 ** PULL KNOB OUT
 SELECT DESIRED HEADING.
 PUSH HEADING LOCK BUTTON TO IN POSITION.
 USE TURN-TRIM KNOB TO OBTAIN EXACT HEADING."
 "DISENGAGE DURING TAKEOFF AND LANDING."
3. On or adjacent to the respective controls:
 "TURN TRIM
 HEADING LOCK
 ROLL
 PUSH TO ENGAGE"
- *** 4. Adjacent to Directional Gyro caging knob:
 "PULL TO SELECT HEADING"
- *** Not applicable when Piper 3-inch face gyros are installed.

- (t) On Control Pedestal under engine controls only when Item 113C(d), 113C(e), 113C(f), 113C(g), 113C(h), or 113C(i) is installed:
 "MANUAL ALTERNATE AIR PULL ON"

- NOTE 2
(Continued)
- (u) On Control Console between seats only when Item 113C(e), 113C(f), 113C(g), 113C(h) or 113C(i) is installed:
"COWL FLAPS, CLOSED-OPEN"
 - (v) On Control Pedestal, under engine controls on Models PA-23-250 and PA-E23-250, S/N 27-2505 through 27-4793:
"MAIN
VOLTAGE
REGULATOR SELECTOR
AUXILIARY"

On right side of instrument panel beneath ammeter on Models PA-23-250 and PA-E23-250, S/N 27-2505 through 27-4916 and 27-7304917 through 27-8154030:
"LT.ALT.-BAT.-RT.ALT."
 - (w) When Item 502(a), 502(b), or 502(c) is installed:
 - 1. On Switch:
"W SHIELD
HEAT"
 - 2. On Circuit Breaker:
"W SHIELD
HEAT"
 - 3. When heated glass panel only is installed; on instrument panel:
"WARNING - THIS AIRCRAFT IS NOT FULLY EQUIPPED FOR FLIGHT IN ICING
CONDITIONS."
(See Item 401(at), 401(aw), 401(az), 401(bj), 401(bw), 401(cb), 401(cl), 401(cm), or 401(db) for list of equipment required before this placard can be removed).
 - (x) Unless otherwise specified, on the instrument panel in front of the pilot when Item 411(a) or 411(b) is installed:
 - 1. To the right of the Control Console:
"PIPER ALTIMATIC PILOT INSTRUCTIONS
LIMITATIONS:
1. PILOT OFF DURING TAKEOFF AND LANDING.
2. PILOT OFF DURING SINGLE ENGINE OPERATION.
NORMAL OPERATION:
1. REFER TO FLIGHT MANUAL
EMERGENCY:
1. DISENGAGE ALTIMATIC CONTROLS.
2. ALTIMATIC PILOT MAY BE OVERPOWERED MANUALLY."
 - ** 2. Below the Directional Gyro:
"PULL TO SELECT HEADING"
 - 3. Adjacent to the Pitch Control Knob:
"UP
DN"
 - 4. Adjacent to the Pitch Control Knob:
"PULL
ALT
HOLD"
 - 5. On Left Control Wheel:
"NOSE "DOWN
TRIM" UP"
 - ** Not applicable when Piper 3-inch gyros are installed.
 - (y) On Left Control Wheel when Item 615(a) or 615(b) is installed:
"NOSE "DOWN
TRIM" UP"

- NOTE 2 (Continued)
- (z) When Item 604(c) 604(d), or 604(e) is installed on only Model PA-23-250, S/N 27-2000 through 27-4916, and 27-7304917 through 27-8154030, and Model PA-E23-250:
1. At each Oxygen Outlet:
"NO SMOKING WITH OXYGEN IN USE"
 2. At the Oxygen Control Knob:
"PULL ON, PUSH OFF, OXYGEN"
 3. On the Rear Baggage Door:
"BAGGAGE CAPACITY 105 LB. MAX., INCLUDES 20 LB. ON SHELF. SEE LOADING SCHEDULE."
- (aa) In view of the pilot on Models PA-23-235; PA-23-250, S/N 27-2000 through 27-4916, and 27-7304917 through 27-8154030; and PA-E23-250 aircraft equipped with alternate instrument static air source, Item 619 or 620:
1. "INSTRUCTIONS FOR USE OF ALTERNATE STATIC SOURCE."
 1. In case of static pressure tube malfunctions due to ice or other obstructions close window and actuate alternate static source valve.
 2. The following airspeeds apply when alternate static source is used:

	<u>INDICATOR READS</u>	<u>ACTUAL</u>
On Model PA-23-235 only per	105 MPH IAS	100 MPH IAS
Piper Dwg. 31987-2:	134 MPH IAS	130 MPH IAS
	157 MPH IAS	150 MPH IAS
	193 MPH IAS	185 MPH IAS
On Models PA-23-250 and PA-E23-250, S/N 27-2000 through 27-4916, and 27-7304917 through 27-7554168 per Piper Dwg. 31987:	<u>INDICATOR READS</u>	<u>ACTUAL</u>
	100 MPH IAS	100 MPH IAS
	134 MPH IAS	130 MPH IAS
	153 MPH IAS	150 MPH IAS
	184 MPH IAS	180 MPH IAS
On Model PA-23-250, S/N 27-7654001 through 27-8154030 per Piper Dwg. 31987-3:	<u>INDICATOR READS</u>	<u>ACTUAL</u>
	87 KIAS	87 KIAS
	116 KIAS	113 KIAS
	133 KIAS	130 KIAS
	160 KIAS	156 KIAS"
 2. On instrument panel below alternate static source actuating valve:
"CLOSED OPEN
ALTERNATE STATIC SOURCE"
- (ab) When Item 412(a) or 412(b) is installed:
1. On Left Control Wheel:
"NOSE "DOWN
TRIM" UP"
 2. On Left Control Wheel:
"AUTOFLITE PUSH OFF"
 3. On instrument panel adjacent to AUTOFLITE Control:
"AUTOFLITE ON/OFF TRIM"
- (ac) When Item 113C(g) or 113C(i) is installed:
"ABOVE 21,000 FEET, REDUCE V_{ne} SPEED 5 MPH PER 1000 FEET"
- (ad) On the instrument panel for Models PA-23-250 and PA-E23-250, S/N 27-2505 through 27-4793:
"VOLTAGE REGULATOR"
"AUX."
"MAIN"

NOTE 2 (ae) When Item 414 is installed:

- (Continued)
1. On Left Control Wheel:
"DWN UP"
 2. On Left Control Wheel:
"A/P OFF"
 3. On instrument panel:
"AUTOFLITE TRIM
L R"

(af) On cabin door panel, auxiliary latch:

"ENGAGE LATCH BEFORE FLIGHT"

(Required and eligible on Model PA-23-250, S/N 27-7654001 and up).

NOTE 3 On Model PA-23, S/N 23-1068, and 23-1152 through 23-1182, eligible for 3,800 lb. maximum weight, the following limitations are applicable:

<u>Airspeed Limits (CAS)</u>	V _{ne}	Never exceed	227 mph	(197 knots)
	V _{no}	Maximum structural cruise	180 mph	(156 knots)
	V _p	Maneuvering	130 mph	(113 knots)
	V _{le}	Landing gear extended	125 mph	(109 knots)
	V _{fe}	Flaps extended	100 mph	(87 knots)

<u>C. G. Range</u>	(+95)	to	(+100)	at	3800 lb.
<u>(Landing Gear Extended)</u>	(+89)	to	(+100)	at	2650 lb. or less

Straight line variation between points given.

(Moment due to retracting of landing gear - 760 in. -lb.)

Required Equipment: In addition to the pertinent basic equipment specified in CAR 3, the following items of equipment must be installed: Item 1(b), 2(a), 3(a), 101(a), 102(a), 103(b), 105(b), 106(a), 110, 111, 112, 201(b), 202(a), 205(a), 206, 301(a), 401(q), and 611.

NOTE 4 Balance weights are required on stabilator and rudder of Models PA-23-250 and PA-23-235 to provide the following moments:

Stabilator - +152 in.-lb. (Leading edge heavy)

Rudder - -46 in.-lb. (Trailing edge heavy)

The net weights listed for the rotating beacons and strobe lights in Items 304, 306(a), and 306(c) include balance weight changes as required by the appropriate Piper Installation Drawings. The installation drawings account for differences in weight of the various lights listed in Item 304, 306(a), and 306(c).

NOTE 5 Models PA-23-250 and PA-E23-250, S/N 27-4781 through 27-4916, and 27-7304917 through 27-8154030 with Lycoming TIO-540-C1A engines (Item 113C(g)) and S/N 27-4426, 27-4574 through 27-4780 with Lycoming TIO-540-C1A engines and Piper Service Kit 760-587 are eligible for an extended C.G. range as follows:

<u>WEIGHT</u> <u>POUNDS</u>	<u>FORWARD LIMIT</u> <u>INCHES AFT OF DATUM</u>	<u>AFT LIMIT</u> <u>INCHES AFT OF DATUM</u>
For Model PA-23-250		
5200	99.0	100.5
5000	95.6	100.5
4630	93.0	100.5
3250	85.7	100.5
For Model PA-E23-250		
4995	95.6	100.5
4630	93.0	100.5
3250	85.7	100.5

NOTE 6 Any aircraft with a letter prefix on the serial number is not eligible for airworthiness certification in the United States.

Example: AR23-XXXXXX.

NOTE 7 Balance requirements for the rudder, stabilator and aileron of Model PA-23-250, S/N 27-7654001 through 27-785483, and 27-785485 through 27-8054000, are as follows:

Stabilator - 2 ± 2 in.-lb. (Leading edge heavy)

Rudder - 45 ± 5 in.-lb. (Trailing edge heavy)

Ailerons - 4 ± 3 in.-lb. (Trailing edge heavy)

Balance Requirements for the rudder, stabilator and aileron of Model PA-23-250, S/N 27-7854084, and 27-8054001 through 27-8154030, are as follows:

Stabilator - 155 ± 3 in.-lb. (Leading edge heavy)

Rudder - 35 ± 5 in.-lb. (Trailing edge heavy)

Ailerons - 4 ± 3 in.-lb. (Trailing edge heavy)

NOTE 8 Model PA-23-250, S/N 27-7654001 through 27-8154030, with Lycoming TIO-540-C1A engine (Item 113C(i)) are eligible for an extended C.G. range as follows:

<u>WEIGHT</u> <u>POUNDS</u>	<u>FORWARD LIMIT</u> <u>INCHES AFT OF DATUM</u>	<u>AFT LIMIT</u> <u>INCHES AFT OF DATUM</u>
5200	99.0	100.5
5000	95.0	100.5
4630	93.0	100.5
3600	87.6	100.5

NOTE 9 The following serial numbers are not eligible for airworthiness certification in the United States.

Model PA-23-250

27-7305220, 27-7305221, 27-7305371, 27-7305377, 27-7405371, 27-7405377, 27-7405388, 27-7405396, 27-7405398, 27-7405438, 27-7405447, 27-7405451, 27-7504455, 27-7554104, 27-7654022, 27-7654031, 27-7654153, 27-7754163, 27-7854057, and 27-7854102.

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